

**FASTEST STOCK CARS FOR '88**

**INCIDENT**



# Radio Control **CAR ACTION**



47380 February 1988 \$2.95  
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THE WORLD'S BIGGEST R/C CAR MAGAZINE

**Stock Car Body  
BUYER'S GUIDE**

**HOTTEST Motors**

**Stock Car  
Blitz**



**LUNCHBOX  
Monster Van**



**How To:  
The Full-Scale Look!**



**CAR ACTION WEEKEND**





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Volume 3, Number 1  
February 1988

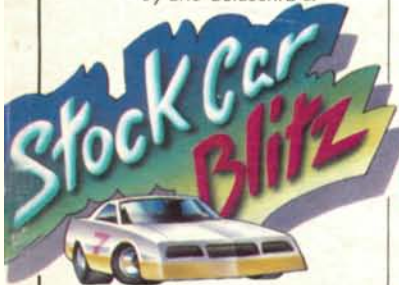


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# EDITORIAL

by LOUIS V. DeFRANCESCO JR.

**S**TOCK CARS!—They're as American as apple pie, and have we got a stock car blitz in store for you in this issue! There probably isn't a kid out there who wouldn't want to tear up the asphalt at Daytona and Talladega.

I can remember seeing my first stock car race; it was at the State Fair in Danbury, Connecticut around 1964. The cars were open-wheel modifieds powered by flat-head and small-block V-8 engines. Most of the cars were Ford and Chevy coupes from the thirties and forties. I can still see the pack roaring out of turn one, flames pouring out of the headers and the air choked with the smell of burning rubber and grease.

This was a far cry from the new superspeedway missiles piloted by aces like Dale Earnhardt and Bill Elliot, and even further away from the high-tech 1/10- and 1/12-scale radio-control cars of today which we can all run!

There's been a recent surge in the popularity of R/C on-road stock cars, and there's a frenzy by many of the manufacturers to get new cars and accessories to the modeling consumers at a head-spinning rate. I guess most of us car freaks can identify with the cars running at the big speedways and I'm sure this is partly responsible for the new trend toward "scale" stock cars. This is just the beginning!

This issue features a story on the stock car race we sponsored at the spectacular Lake Whippoorwill Superspeedway in Orlando, Florida. It was an unprecedented success. Never before has a radio-control race event attracted so much media coverage and the introduction of so many new cars and accessories, not to mention the number of participants. It has unquestionably set an industry standard, and is only the tip of the iceberg.

So, in keeping with our Stock Car Blitz theme, we have quite a cross-section of the latest 1/10-, 1/12- and even 1/4-scale stock cars, plus the latest chassis, motors, lexan bodies, "How-To" tips and much more. Of course, all our great regular reviews and articles are here too.

One final note: you'll all be pleased to know that this is our last bimonthly issue. Starting March 1988, we'll publish *Radio Control Car Action* on a monthly basis. This means much more car action info for you! As we embark upon our third year of publication we'd like to thank all our readers for making *Radio Control Car Action* the success it is, and I assure you we'll keep striving to make the magazine better with each issue. Enjoy!





# Letters



## R/C Daydreams

I'm a fifteen year-old R/C car enthusiast, and I love reading your magazine, especially in class! I've purchased a few R/C cars in the past three years, and I'm updating them constantly. I have a question about R/C electric motors. I have a couple with adjustable timing, and was about to purchase another. Before I do, I'd like to know about some of the advantages of adjustable timing. Also, I recently ventured into gas, and bought the Kyosho Datsun 10, and an O.S. MAX 10 FSR-B. I've been having trouble starting it, and was wondering, "Am I doing something wrong?"

SCOTT ANESHANSLEY  
Broken Arrow, OK

*Scott, advancing the timing on your motor will give higher RPMs, hence greater top speed. Keep in mind that you'll be cutting down on running time and low end torque.*

*As to your problems with starting your glow engine, you weren't too specific, i.e., did the engine start and quickly die out? Did it not even kick? Or did it just take quite a long time before you did in fact get it going? These are all important in diagnosing trouble. I can tell you it's very important to have a freshly charged starting battery for good starting. It's also good to keep a check on the glow plug; the element should glow bright orange when the battery is connected. It's a good idea to replace an old plug even if it is still working. Sometimes you'll find it adds new life to a cranky motor. Also, don't forget to keep your fuel clean and fresh; old fuel will lose its nitro content and that can definitely affect starting.*

*Scott, I'm very glad you enjoy our mag so much, but I'll feel badly if you end up in summer school when everyone else is out racing, but probably not as bad as you'll feel.* CC

## Dubious Dealings

I'm 11 years old and became interested. I bought a Monogram Lightning from a hobby store for \$156, and this car keeps on breaking. After a year I asked the hobby shop to sell it for me. They said it's only worth \$14, and after all the work that was put into it! I think it's a rip-off! What should I do?

CARL YLINEN  
Grand Haven, MI

*Carl, if the car is presently in good running order it's definitely worth more than \$14. Most hobby shop owners are there to help and cultivate return business, and are not out to rip you off. The man who made the offer probably felt there wasn't a great resale market for such a car, or in fact was out to make a big profit—it's hard for me to say for sure. In any event, you're definitely better off selling the car on your own, excluding the middle-man who is naturally out to make a little profit for himself, which cuts into the money you'll ultimately get.*

CC

## A New Suggestion?

Response to "Big Jim" (Oct. issue)—

I don't believe as Mr. Greenmeyer suggests that the rule-makers are trying to create rules favoring their own products. Shortening the length of 1/12-scale on-road races could help in the stock classes provided the motor rules weren't revised to allow more radical power plants, but the modified guys would simply wind 6-minute or 4-minute motors depending on the new rules. Better batteries will always be available and Joel Johnson will always have a better set than I have. Perhaps a battery-claiming rule would help but, like it or not, you can't fight factory teams and sponsorship money. If you think that's not true try to race NASCAR or CART.

I feel that ROAR could best serve the groups by coming up with a generic chassis/engine combo for each type of

racing, and having the parts produced by all or any of the manufacturers. This would allow equal racing, at low cost, and maximum utilization of driver skill. It could help everyone involved. The hobby shops would have the right parts, the manufacturers could tool for long production runs, and the guys at the track could show up without fear of being left in the dust by the new, hot set-up.

BOB THOMAS  
Pittsburgh, PA

## Mom Approves

I'm 12 years old and I'm saving for a 1/10-scale car but started out with something smaller—a 1/12-scale Turbo Panther by Nikko. I saw your Track Report on the Tyco Turbo Hopper in the April 1987 issue, and I wonder if you'll do a Track Report on the Turbo Panther? Love those pictures. Keep up the good work.

ROSS SCHUELLER  
Jenison, MI

A parent's comment—

We purchased the Turbo Panther because it had an adapter which would plug right into the car and so recharge its rechargeable batteries. We have about \$75 in the car, and think it was a great starter car for our son to see if the interest would last. It has, and he reads your magazine cover-to-cover. He's now ready to move up, and your information has been a great help!

LINN SCHUELLER  
(Ross' Mom)

*Ross and Mom, I'm glad the Turbo Panther served as a positive intro to the R/C car world. In the future we may do a report on the car, but from what I get out of your letter, a 1/10-scale car should be your next step. If so, may I suggest a Kyosho Cosmo, or maybe a Tamiya Hornet? Both cars are rugged and can be performance-upgraded with after-market parts as you progress. Most chargers*



either come with or can be adapted to a plug for a car cigarette lighter, although I'd recommend charging directly off the battery because Ni-Cds have been known to leak while being quick-charged. Have fun, and if other questions come up please don't hesitate to write. CC

### Bummerang

There's only one way to describe your mag. "Totally Rad, dudes!!" I just finished reading your August '87 issue and on the front cover the Monster Beetle almost jumps off the page! You guys are really doing a primo job!

My reason for writing to you concerns the Boomerang. I have recently purchased one and heard it was an excellent 4WD car. But after building and test driving it I've found it's not so hot, and I've written to you hoping you'll give me suggestions on how I can "hop up" my Boomerang.

Thanks a lot and keep up the good work!

RANDY B.  
Mercer Island, WA

Randy, the Boomerang is, in fact, a very good car, one of Tamiya's best. Many friends of mine are very pleased with theirs. Like all other 4WD cars I can think of, the Boomerang can use a hot modified motor due to the higher drag inherent with the more complex drive-train in 4WD cars. However, you weren't specific as to your problem, so motor up-grading is only my guess.

In the future please give more details when writing in so we can give more accurate help. Thanks for your support, Randy. CC

### Drag Mania!

I would first like to say that your magazine is a first-rate publication and that you will be receiving my subscription very soon. I was very impressed

with your October '87 issue.

I've been a fan of drag racing since 1968 and in that time I've seen the sport evolve into a very sophisticated and competitive one. I hadn't followed the hobby/sport until last year when I bought a copy of your magazine. I was amazed at the developments which had occurred since I was last involved with it. I'm very impressed with the 1/4-scale cars offered by Pacesetter, but I'm put off by the price. The great advancements in 1/12- and 1/10-scale electric cars make me seriously consider investing some time and money in this very pleasing hobby/sport once again.

Again I would like to praise you on your outstanding magazine and will send you photos of my projects as I complete them. Hope to hear from you soon.

CHRIS BUCK

Chris, our March issue will be a Drag Car Special featuring 1/12-, 1/10- and 1/4-scale cars. Many people are put off by the price of 1/4-scale cars as you are. However, the future looks bright. Advance Engineering is coming out with new 1/12- and 1/10-scale Pro-stock, Funny-car and rail-type electric cars which we'll feature, among many other things, in this special issue. Watch for it. CC

We welcome your comments, and suggestions. Letters should be addressed to "Letters," Radio Control Car Action, 632 Danbury Rd., Wilton, CT 06897. Letters may be edited for clarity and length. We regret that due to the tremendous amount of letters we receive we cannot respond to every one.



**WORLD  
ENGINES  
INC.**



**ROCKBUSTER** - 1/10 off-road electric R/C car. Designed for the entry level driver. Features - RS-380 motor, rear differential, soft rubber tires, 3 speed forward/3 speed reverse speed controller. Requires a 2 channel radio, and a hump battery pack to run (not included).

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|-------|--------------------------------|---------|
| 21331 | Kit .....                      | \$59.95 |
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**HOPPED-UP ROCKBUSTER** - Same basic design as above Rockbuster but comes with a RS-540 motor, new suspension, bigger tires and hubs. Designed for competition.

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| 21335 | GATES GE <sup>MAX</sup> hump battery ..    | \$23.95 |
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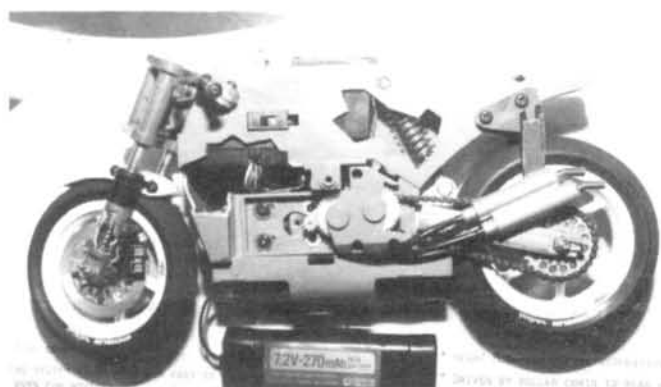


# The Inside Scoop

by CHRIS CHIANELLI

**T**HE R/C CAR industry is rapidly advancing, with new products being offered at a head-spinning rate. So, I'll make manufacturers nervous, but feed you R/C squirrels who are hungry for info, by bringing you a special report on security leaks and "late-in" items. Here goes!

**T**HE 1987 RCHTA SHOW in Chicago mesmerized me. It was a veritable blitz of new cars and performance goodies; I couldn't even keep track of the new electronic speed controllers that were introduced. To put it another way, this month's Inside Scoop could have been ten pages filled with what I saw the weekend of November 7 and 8 but Louis, "the Ayatolla of Radio Controlla," DeFrancesco would only give me two!



Kyosho 1/10-scale Electric Cycle.

**A**S USUAL, Kyosho descended on Chicago with a barrage of new stuff, driving the race freaks further into a state of catatonia. Their new 4-wheel shaft-drive Shadow looked



Mid-Engine Optima.

uncomplicated and so did the 2WD Raider. The rumored Optima is now a reality and it will also be offered as a Mid Turbo Optima. Also in 1/10-scale is an electric motorcycle... What next?

\* \* \*

**A**N ELECTRIC speed controller that caught my attention was the Robart HQ series units. As I was passing the Robart booth one of the guys was holding onto an airplane propeller that was on a cobalt 40 motor being fed by eighteen cells via a Robart HQ controller. The



system was on while the prop was being held. In other words the motor was completely stalled under full load! In the past this would wipe out a unit instantly, but

the Robart never blew, and this demo went on for four days. Rumor has it that the HQ units can handle up to 30 cells.

\* \* \*

**J**UST IN!... You can now join the "Trinity, Joel Johnson World Champion Team." You'll get a Trinity T-shirt, a team sticker sheet, "Team Newsletter Quarterly," written by Joel Johnson on car prep, how to win, tune-up tips etc., and a "Team" membership card. For more information contact: Trinity, 1901 E. Linden Ave. #20, Linden, NJ 07036.

\* \* \*

**R**EVTECH'S NEW Sizzler a wind specifically designed for the high-speed oval like the one at Lake Whippoorwill will be available very soon, and I understand this motor is dangerous!

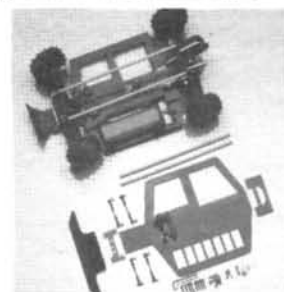
\* \* \*

Advance has introduced their new Super Sport RC-10 conversion for stock, G.T.P. and (my favorite) Indy car bodies. For you Radiant



Advance Sprint-Car conversion.

owners AYK has completed their conversion to oval kit for this car. The on-road pioneers at BoLink have



RCH Optima conversion.

made a smart move by putting together a sprintcar conversion for the overnight success, Ultima. Watch for a



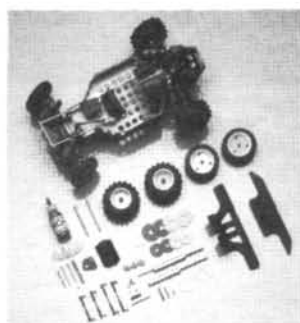
Advance Super Sport.

**S**PEAKING OF OVAL, Shigh-bank, dirt or otherwise, the car offerings in this category are as plentiful as new speed controllers.

full-blown review.

Not to be left behind, RPS's new C4 Yokomo dirt-oval car looked well-thought-out, as did RCH's (of Mesa,



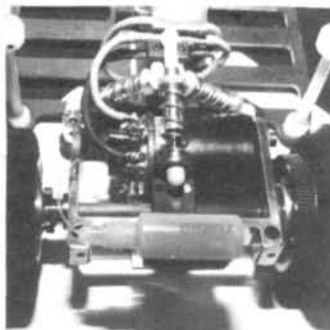


RCH RC-10 conversion.

CA) conversions of the Optima, RC-10 and Yokomo.

As you can see, oval-track fever is just taking hold, and the infection is not about to go away.

\* \* \*



Paragon Turbo-Pack.

**H**AL AND NORM of Paragon Racing Products have what they call a Turbo Pack. This is a fluid reservoir injection system that stores cleaner/electro-conductive fluid which is metered directly onto the commutator via micro tubing. I'll be using one of these units on my car in the March Drag Issue to get the jump on Fred Murphy's!

\* \* \*

**A**S I'VE ALREADY stated, the speed controllers were as rampant as rats in a city sewer, so it's impossible for me to mention them all. There were two that I must make note of. PDI's new controller has no external adjustments. Instead, it has a microcomputer which is programmed by a remote loading unit for unlimited brake, throttle and stroke configurations. This major breakthrough controller is still competitively priced.

\* \* \*



Pandamonium.

**W**HILE AT THE SHOW I had a chance to drive the Varicom Panda, the first out-of-the-box car with MOSFET speed controller. I was challenged to "try and trash this controller." I ran the car at full speed and jammed the throttle into reverse (not recommended) at least twenty times back-to-back. The fully proportional unit continued to function flawlessly while we all tortured it until the Ni-Cds started to dump.

\* \* \*



**UNVERIFIED:** Reportedly these new 1/6-scale drag cars, as of yet undisclosed origin, are available with superchargers and—get this—nitrous! Watch for updates as they come in.

\* \* \*



\* \* \*



Parm 49 Merc.

**A** FEW MONTHS AGO I mentioned Parma's new 49 Merc. Well, here's a first-time look at my all-time favorite cruiser. It happens to be chopped, and is from the Body Boys of Ohio. The photo doesn't do justice to the look of this car. Hope you're not disappointed—I know I'm not.

\* \* \*



Keeping the industry BUGGED. See you next mission...

CC



Condor 1/24-scale Testarossa.



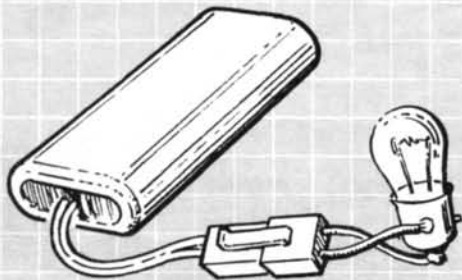
**H**ERE'S A LOOK at Condor Trading's 1/24-scale Testarossa. This car features a Lexan, not ABS body, gear diff, and specially designed micro radio. Looks like this new R/C variation is taking hold.

\* \* \*



# Pit Tips

by JIM NEWMAN



## Ni-Cd DISCHARGER

Solder a 12-volt auto bulb to one-half of a connector. When the bulb goes out, the Ni-Cd is "flat" and ready for its fast change.

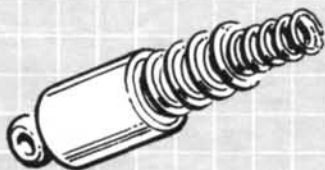
*Rick Poon, Huntington Beach, CA.*



## MINIMIZING SHOCK OIL LEAKAGE

By inverting his oil-filled shock units as shown, this driver has minimized oil loss. They do still leak, but not nearly as much.

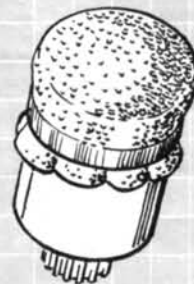
*Bill Carr, Edwards, NY.*



## STIFFER SUSPENSION

To increase his spring-rate this owner merely slipped smaller-diameter springs inside the regular ones. A word of advice... ideally, if the outer springs are wound clockwise, the smaller-diameter springs should have a counterclockwise wind. This prevents the coils from intertwining and becoming "solid."

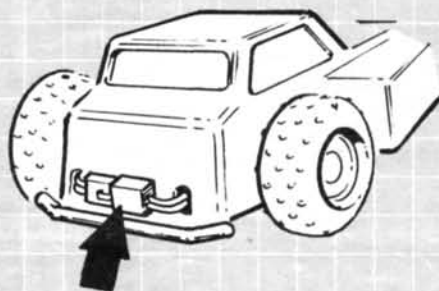
*Mark Holman, Eagan, MN.*



## END BELL AIR FILTER

Yet another way of allowing cooling air to the commutator without the ingress of grit. A piece of thin, porous foam plastic of the bath mat variety, is held in place with rubber bands or a piece of heat-shrink tube. This completely covers the brush gear yet allows air flow.

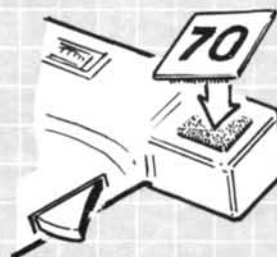
*Robert Jordan, University, MS.*



## EASY CONNECTOR ACCESS

To eliminate the need to remove the body each time battery-connector access is required on his RC 10, this owner has rewired the system to place the connector at the rear of his car.

*Harvey Gleason, Lake Elmo, MN.*



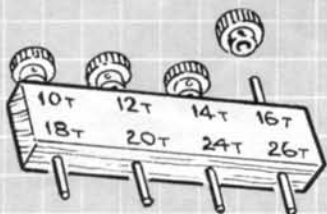
## QUICK-CHANGE FREQUENCY TAG

As a reminder to himself after changing crystals, our correspondent has made up numbered tags from card or plastic. Glued to the rear of each is a small square of Velcro®, with the mating part glued to the front of the transmitter. Question! How does one remember to change the tag after changing crystals?

*John O'Brien, Winter Spring, FL.*

**Radio Control Car Action** will give a free one-year subscription (or one-year renewal if you already subscribe) for each idea used in "Pit Tips." Send rough sketch to Jim Newman, c/o **Radio Control Car Action**, 632 Danbury Rd., Wilton, CT 06897. BE SURE YOUR NAME AND ADDRESS ARE CLEARLY PRINTED ON EACH SKETCH, PHOTO, AND NOTE YOU SUBMIT. Because of the number of ideas we receive, we cannot acknowledge each one, nor can we return unused material.

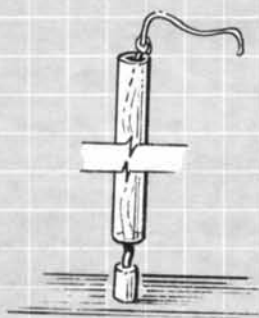




### SIMPLE PINION CADDY

A block of wood, short lengths of  $\frac{3}{32}$ -inch music wire pushed through after drilling, and some neat numbering indicating number of teeth keeps these spare pinions well organized. How about some neat transparent covers or a foam-lined storage case to prevent pinion-tooth damage in the tool box?

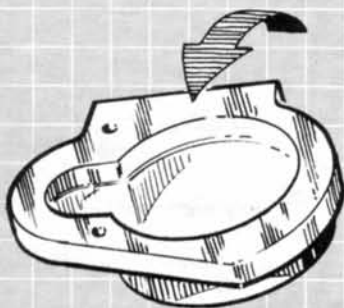
*Donnie Glover, Dothan, AL.*



### FLEXIBLE ANTENNA ROD

Wire antenna rods are disliked by this driver. He has to straighten them—frequently! He's replaced his with a plastic drinking straw from a 7-11 store. The straw plugs firmly over the original antenna mount while his antenna wire now runs up through the middle, and out the top. Do not shorten the wire or double it back, or short range will surely result.

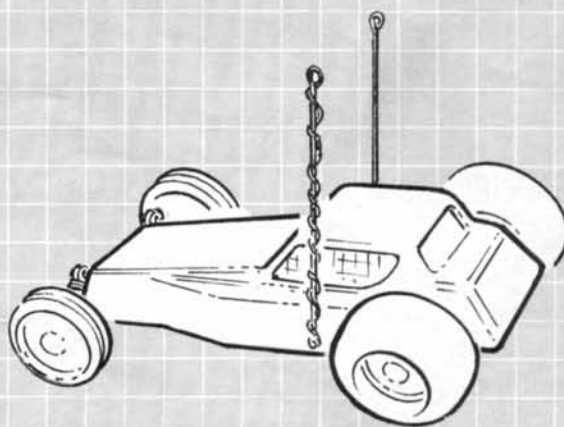
*Mike Robert, Ottawa, Ont., Canada.*



### GREASE GASKET

Before attaching the differential cover to his R/C 10 our contributor applies a thin, even coat of Vaseline® to the mating surfaces. This effectively seals against water and grit. He also tells us that he lubricates the differential gears with Vaseline® too, resulting in smoother, quieter running.

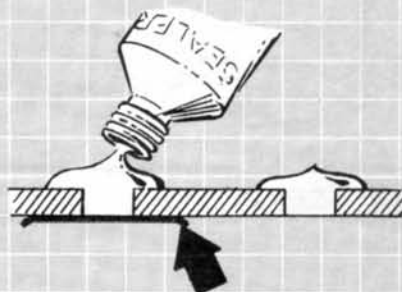
*Barry Friesen, Horndean, Manitoba, Canada.*



### ROLL-OVER PROTECTION

To protect his car from roll-over damage, as well as give some self-righting capability, this driver has installed twin, stiff wire "antennas," one each side of the car. Note the loops at the top of each for eye protection, and note also how he coils his receiver antenna around one of them.

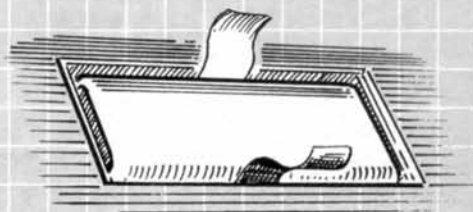
*Jason Yuen, Kalua-Kona, HI.*



### NEAT HOLE-FILLING

Not all the holes on an RC 10 chassis are in use, and through them comes water and dirt. An easy way to fill them is to place a tape patch (arrowed) over the underside of each hole, then squirt a blob of silicone tub-sealer into each hole from above. Wait until the sealer cures then peel off the tape to reveal a neat, flush "rivet" of silicone seal.

*Doug Baumgarten, Slidell, LA.*



### GRASSHOPPER Ni-Cd REMOVAL

Lay a wide, thin tape in the battery compartment then lay the Ni-Cd pack on top of it. To remove the Ni-Cd just pull up on the two ends of the tape.

*Ben Nagy, Wharton, NJ.*

# FASTEST MOTORS

## TOP THREE 40 MPH HOT WINDS!

by RICH HEMSTREET

**T**HE RADIO-CONTROL Car Action Weekend gave motor manufacturers their chance to shine. Lake Whippoorwill International Speedway is the fastest track in radio-control racing. The 1/10-scale stock cars were running in excess of 42mph average lap speeds. In fact, the 1/10-scale Invitational TQ averaged 38mph in a five-minute run through traffic.

To run that kind of speed, you need a high-performance motor. Which motors do the experts choose to run those speeds? We'll look at the top three modified motors and the top three stock motors for 1/10-scale superspeedways.

The motor that came out on top at the Weekend was the CAM\* modified. With Bud Bartos driving, the CAM motor took the Novak 600, qualified second-fastest in the BoLink Clash and won the Pepsi Challenge 1/10-scale A-main. The CAM motor came onto the scene at the Grand National Stock Car race in March at Lake Whippoorwill. Now that CAM has duplicated its earlier success, it should become a hot item at the sales counter.

Twister\* didn't have very many drivers, but they had their motor in the right car. Steve Swindle had a 44-lap TQ run in his first qualifier. He topped that run with a 45-lap effort in his second qualifier. Swindle's Twister-powered Eliminator was the only 1/10-scale Invitational car to turn 45 laps in qualifying. Besides having TQ, the Twister-motored cars finished fourth and fifth in the A-main. Twister was the only motor manufacturer with two cars in the top five finishers.

Trinity\* came to do battle in the Invitational ranks. A Trinity-powered team came second in the Novak 600. The Joel Johnson/Jim Fuller team earned the pole for the 600 by running the fastest 125 qualifier. Jeff Davis finished second in the Pepsi Challenge A-main, driving his Trinity-powered Predator.

Trinity power was also used to capture the Amateur 1/10-scale Modified title for

John Robinson, and three trinity drivers qualified for the Invitational A-main; more drivers than any other manufacturer.

Since ROAR rules permit a number of modifications in the Modified Motors class, many people feel it's unlikely you'll be able to buy motors identical to the ones the invitational drivers used. Even if this is so, no manufacturer would be in business long, making super-special motors for his factory drivers and producing trash for the general racer. It's obvious that CAM, Twister and Trinity all have an image to uphold at local club events throughout the country.

What about the three hottest 1/10-scale stock motors? First, there were actually only two stock motors that stood out. Almost every stock-class racer used either a Trinity or a Losi\*.

The Trinity stocker driven by Jan Limpach won the 1/10-scale A-main. Limpach had qualified second-fastest with a 40-lap run. Only the top two qualifiers broke the 40-lap barrier. Trinity also powered the third-fastest qualifier.

The 1/10-scale stock TQ run was set by Chris Powers, driving a Losi-powered PR7. Powers ran 40 laps, both during qualifying and while finishing second in the A-main. Losi-powered cars also took fourth and fifth in the A-main.

These stock motors seemed to work

the best for all-out speed. While Trinity markets a stock motor for superspeedways, it's virtually the same motor they sell for off-road stock racing. That's because the ROAR stock motor rules are so strict about what constitutes a stock motor. The best thing is that you can actually go out and purchase the same motor for your own racer. A little bit of work on the brushes and spring tension takes care of tuning these stock motors.

When you choose your next motor, you should look first at what the winners are using. It naturally follows that their successes on the track will spill over into manufacturing, giving us all the chance to take the lead.

*\*The following are the addresses of manufacturers mentioned in this article:*

CAM Racing Motors, Rt. 3 Box 680, Huntersville, NC 28078.

Twister, 371 Powell, #B102, Azusa, CA 91702.

Trinity, 1901 E. Linden Ave. #20, Linden, NJ 07036.

Team Losi, 1655 E. Mission Blvd., Pomona, CA 91766.



High-speed oval killer cans. From left to right: the CAM Pro Motor; the Twister from Walker Manufacturing; the Trinity Monster Horsepower Davis wind.





Track Report

MRC

# LUNCHBOX

by STEVE POND

Photos by STEVE POND





**T**HE LUNCH BOX, from MRC/Tam-

iya\*, is the latest contribution to the wild world of monster trucks which are daily gaining popularity. The



**A 1/12 SCALE  
WHEELIE-POPPIN'  
MONSTER MASHER!**

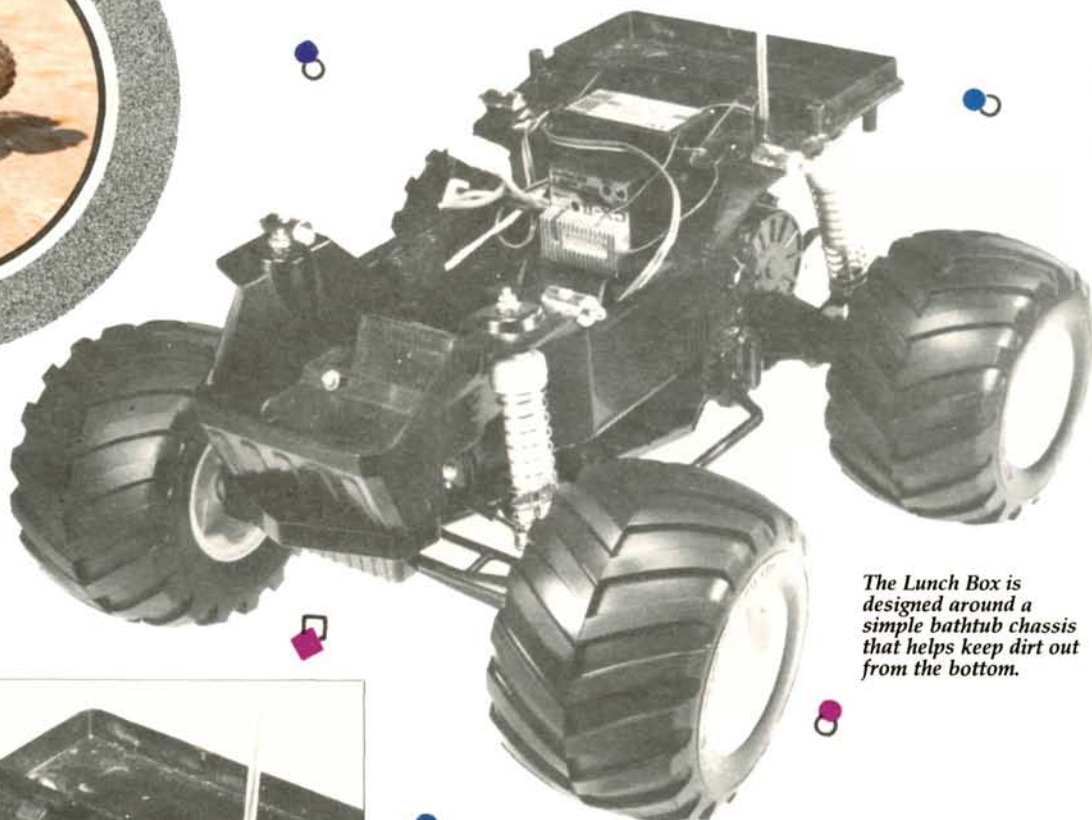


Lunch Box is not the stereotypical monster truck with a pick-up body, but a Dodge van body which has added a little diversity to a somewhat single-minded field of monster-makers. Although of the same breed as its other monster brethren, the nonconformity of the Lunch Box does not stop at the outer body. Instead of being one of the many making a bid to be the biggest on the block,

the 1/12-scale Lunch Box is one of the smallest monsters of its bloodline.

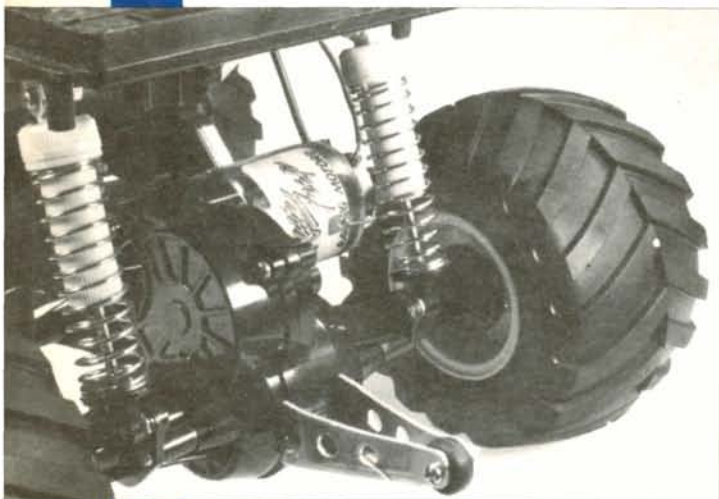
**THE KIT:** The Lunch Box borrows its chassis design from the 1/12-scale Mitsubishi Pajero, and you might recognize the front suspension and rear-end hardware (with the exception of the shocks) as that of the Hornet. This suspension is also standard equipment on the Pajero, although it's





*The Lunch Box is designed around a simple bathtub chassis that helps keep dirt out from the bottom.*

*Hobby Shack EX-5 was used along with KO CX-II speed controller with reverse.*



*Race Prep stock motor (orange can) provided the Box with a bit more alacrity.*

difficult to say which manufacturer gave birth to this versatile suspension arrangement. Nevertheless, the system works, and it would be an exercise in futility as well as a drain on the wallet if a completely new chassis were made for the Lunch Box. The features of the kit include a sturdy box-type chassis, coil-spring dampened front and rear suspension, a three-step forward and reverse speed control with a BEC connector plug, a Mabuchi 540-type motor, sealed gearbox with differential, 115mm diameter monster-type tires and, as with all other Tamiya kits, a very detailed body to round out the package. Other items needed to get the gears in motion are a two-channel radio system and a 7.2-volt flat battery pack.

**ASSEMBLY:** Prior to assembling the Lunch Box, gather the necessary tools as clearly outlined in the instruction manual. Once you have these tools and the required accessories, you are ready to begin assembly.

Begin with the installation of the radio system. Virtually any type of radio system will fit the Lunch Box, ranging from a standard system with a receiver battery, to a system with BEC or, in my case, the KO PROPO EX-5 with an electronic speed control. This radio system includes a KR-285A two-channel receiver, a PS-201S high-speed servo, and an RM-7 MOSFET electronic speed control with a built-in voltage regulator. This system might be overkill for the Lunch Box, but I've always emphasized superior performance, and this system really delivers.

Next in the construction process is the assembly and

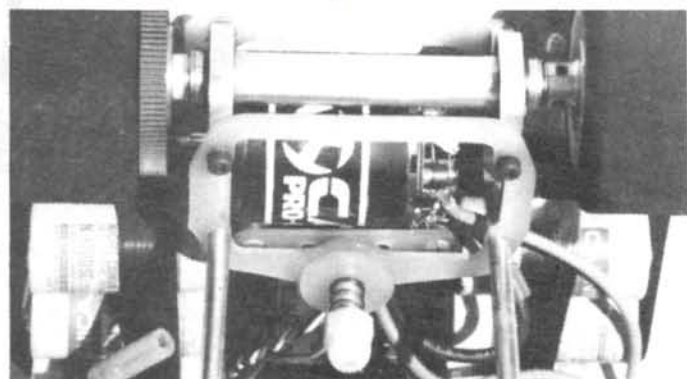
*(Continued on page 113)*



# Buddy's TRC PRO-12



## A close-up look at a World Champion's race car



*The heart and soul of the Bartos/TRC combination is a CAM Pro-Motor.*

by BUDDY BARTOS

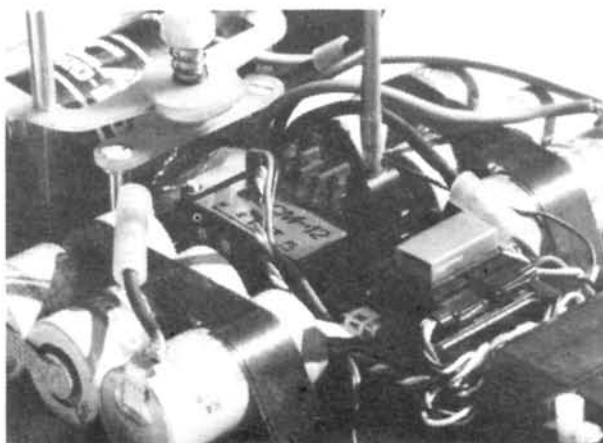
**T**AKING OFF with a rolling start, you go into turn one at quarter throttle. Feeling the car as you begin to turn in: tires feel fine, steering's okay. You go into turn two giving it a little bit more throttle. A couple of quick, left-to-right wiggles tell you whether the tires are hooking up or not. Then, it's into turn three. Now, you have to decide if you want to go on the clock this lap. Everything feels good, so you shout down to start your time. In and out of turn four, you ease the throttle up to full power and begin to set your line for turn one. The car blasts out of the turn and screams down the short straight on the tri-oval.

You'll never forget going into turn one, the car and power working perfectly. And you try to keep a tight line and be as smooth as possible so you can turn in your best time.

Your first lap is a 6.0, the fastest lap ever turned in on the track. Now, you

squeeze it out just a little bit more and your second lap is an astonishing 5.9—the world's fastest lap on this type of track.

What you have just accomplished is a first. The race was the Reedy Modified's\* Speed Run that was held in conjunction with the Competition Plus Grand National Stock Car Championships.



*Trinity matched Sanyos, CMW electronic speed control and Futaba radio system, other Bartos champ car features.*

Now, let's see how the car was set up to do it. To start off, a TRC\* Pro-12 car was used, set up according to the instructions except in the rear, where a Bud's Racing Products\* adjustable roll bar was used. This allows for quick and easy weight adjustments for each wheel, something that's very useful in oval racing.

TRC Green Pro cut tires were used all around, the right front being a full width and 1/16 inch diameter larger than the left front. The front end was set with 4° caster and a slight amount of toe-out. This improved stability and made the car easier to drive. Compositcraft\* Tire Traction was used all around. This stuff gets really sticky so pay attention to how much you use.

Trinity\* No. 5001 matched Sanyo cells were used for power. These were charged on a special charger at 15 amps and then further charged on a Bud's No. 7001 trickle charger for two hours.

The heart of pure speed is the motor, and here a Cam Pro\* motor was used.

*(Continued on page 50)*





by ERIC GOLDSCHRAFE

**T**O MANY DIE-HARD fans, Richard Petty is stock car racing—the undisputed king of the sport. His famous number—43—has been painted on the doors of Oldsmobiles, Plymouths, Dodges, Chevrolets, Buicks, Pontiacs, and Fords, and he's visited victory lane a whopping 200 times. A collection of stock car articles would not be complete without an article on this living legend and his machine.

Since this article deals primarily with the creation of a model of a well-known Winston Cup car body, the chassis

# OUT OF THE PETTY GRAND NATIONAL STOCKER

details will be minimal. The relatively large stocker bodies will fit almost any chassis, and varied chassis combinations are used by different groups. Creative readers will pick up the techniques used to reproduce the graphics, and will



*Finished 1/10-scale NASCAR of the winningest driver in history, "King Richard Petty."*



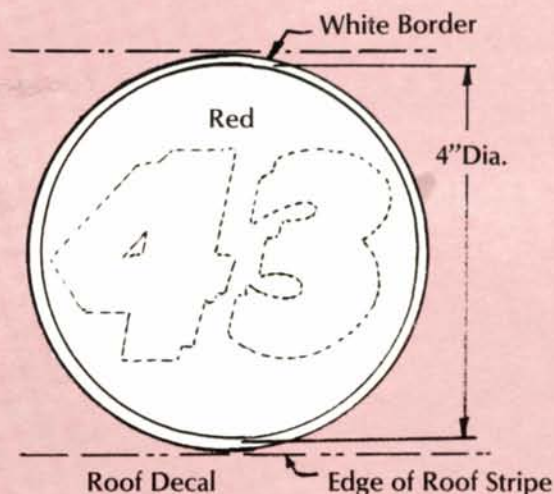
utilize these processes to produce their own favorite racers.

If you're a 1/10-scale builder and like the fast and colorful NASCAR stockers, you're in luck. There are bodies available to construct any current Winston Cup car. Several decal sheets have been produced by Autographics\* and, more recently, by Parma\*, featuring the billboard-sized logos of several major sponsors in Winston Cup racing. While these are big time-savers, you still have to come up with the numbers. Any old decal just won't do; many number decals are color-coordinated with the sponsor's color scheme, and have unique styles. It's really quite easy to reproduce these details, and it helps to make the car look right.

The body used for this particular project is the MRP\* No. 1123 Pontiac Grand Prix 2+2, and although some of the contours have been "fudged" to permit vacu-forming, it's one of the more realistic-looking stocker bodies available. After a trial fitting on an MRC\* Hornet chassis, the body was trimmed to the indicated cutting lines with a sharp knife. As no paint in the right colors is available for lexan, the body required some additional preparation by scuffing-up the inside (except for the windows) with an abrasive plastic pad, and then thoroughly washing with a liquid detergent.



Door & Roof Numbers  
White/Black, (3 Sets Req'd)



Above and below, patterns for 1/10-scale markings on the Petty machine. Use these patterns to aid in cutting out from MonoKote trim sheet.

## GET THAT FULL SCALE LOOK!

King Richard's car is painted Petty Blue and STP Orange by agreement with his well-known sponsor. (See accompanying sidebar article.) Testors\* model enamel can be used successfully on lexan by thinning about 50-50 with Floquil\* Dio-Sol thinner and adding some automotive flex agent (about 20 percent). The flex agent keeps the paint

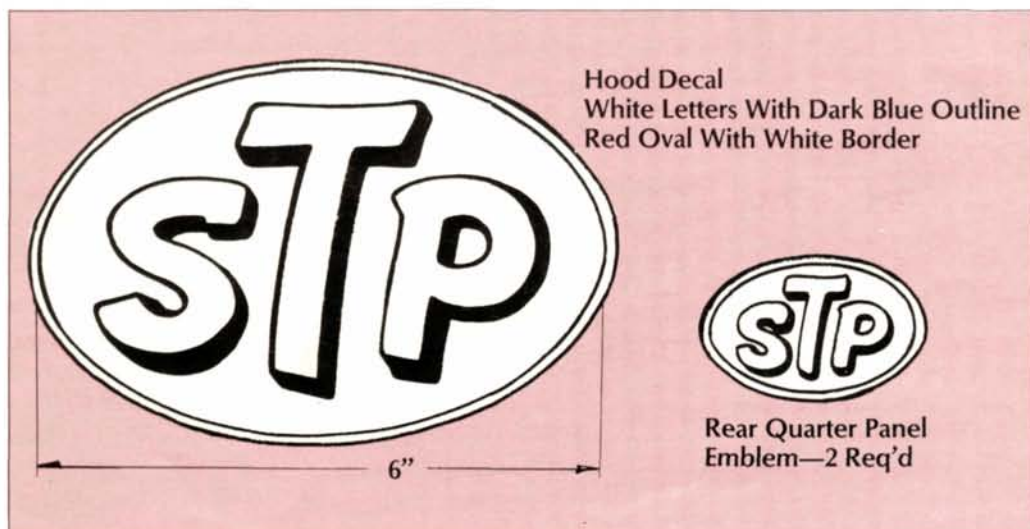
flexible after it dries and, although it's not readily available in small quantities, you might be

able to persuade a friend at a body shop to let you have some if you provide a small jar. Paint mixed with this additive doesn't have a long shelf life, so mix only as much as you need. Testors Fluorescent Red is just right for the STP Orange, and Testors Chrysler Engine Blue, with a little white added, will match the Petty Blue.

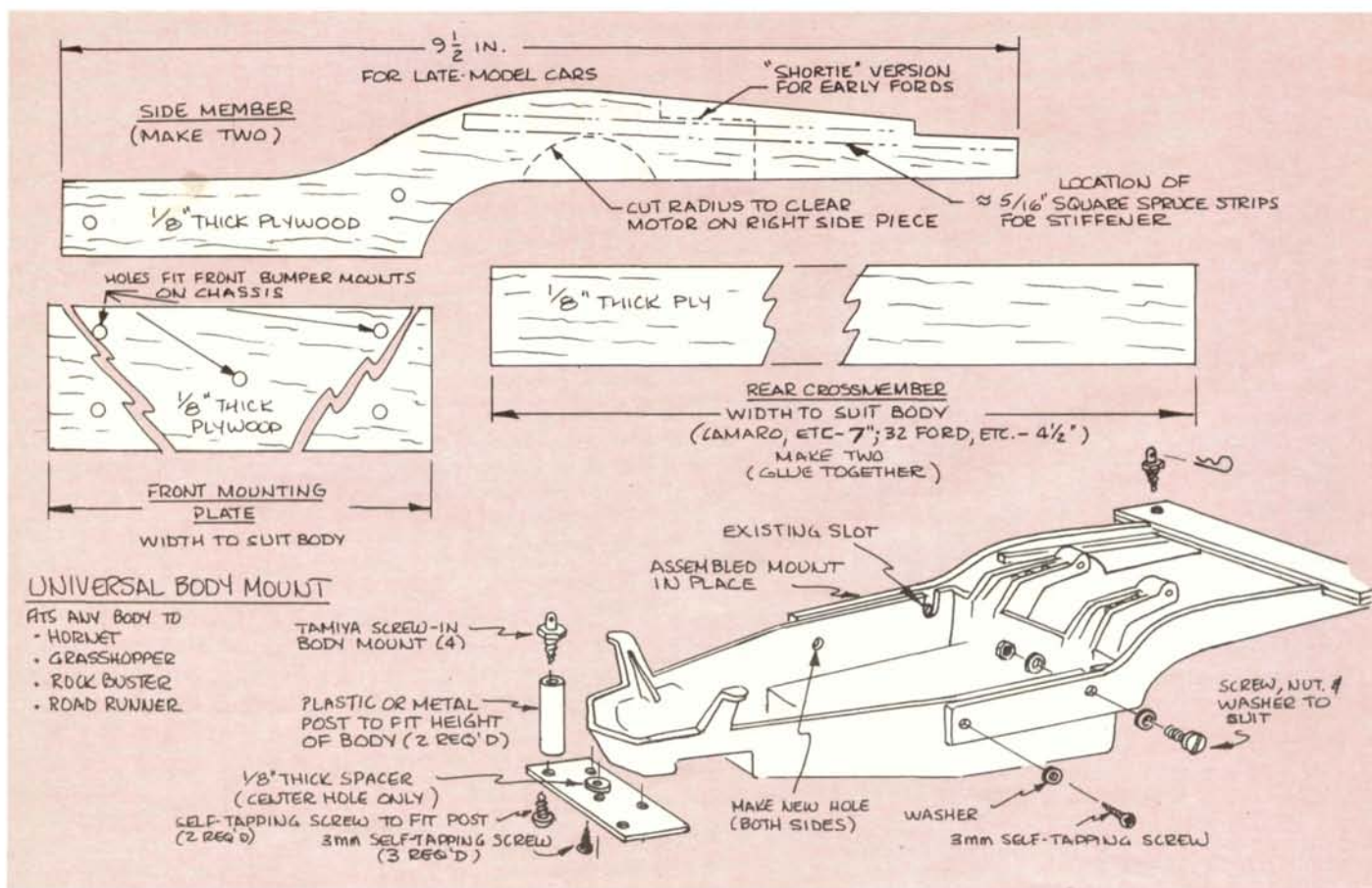
To research these colors, or any other Winston Cup car, I recommend the *Official NASCAR Yearbook and Press Guide\** or *Grand National Illustrated\** magazine. Both

publications are printed on fine-quality paper with good color fidelity, and fans will enjoy them. *GNI* is a bimonthly magazine dedicated to all facets of Winston Cup racing, and the *Press Guide* is an annual publication listing all the races, tracks and color profiles of the drivers and their cars.

Colors mixed as previously explained were airbrushed onto







*This light plywood (poplar) universal body mount in conjunction with the Hornet frame allows for use of various bodies.*

the body, with a coat of white backing the red to provide the proper undercoat for the fluorescent paint.

The rest of the work is done on the outside of the body (as with the full-size cars). The logos and numbers are giant decals allowing quick repairs and easy consistent finishing of new cars. To create the door-sized 43 numbers, I first found a clear side-view photo of the real car and then enlarged it to the required size on an office copy machine. With great care, I then accurately traced the numbers onto a piece of vellum (tracing paper). Several copies of this drawing were made on vellum paper as they would be used as disposable cutting masks. The white portion of the numbers was carbon-copied onto the back of a piece of white Top Flite\* MonoKote trim sheet stock.

Three copies of the 4 and 3 were produced (the roof number is the same size as the sides on this car), cut out, and carefully applied to a piece of black MonoKote trim sheet, leaving enough room between

them for the outlines.

Working with one number at a time, I centered the vellum copy's white outline in place over the white cut-out number and taped it in position. With a sharp No. 11 blade in an X-acto knife, I carefully cut along the black outline, cutting through the black trim sheet as I went. This resulted in perfectly positioned outlines and shadows. Following this, the side numbers were applied to the body.

The roof number must be stuck on a circular piece of red MonoKote, with a white border created by mounting the red disk onto a piece of white material, and trimming to leave a thin border. You might have to practice a couple of times before you get it perfect, but it's pretty easy once you figure it out. I used a piece of artists' illustration board to cut on, as it isn't so hard that it blunts the point of the knife, but it does provide a smooth surface on which to operate.

Murphy's Law (sorry, Fred) said that out of all the different sizes of STP decals available, none was

*(Continued on page 50)*





# Stock Car Body Buyer's Guide

The recent meteoric rise of  $\frac{1}{10}$ - and  $\frac{1}{12}$ -scale oval racing has increased the demand for many more R/C oval track cars. Most of the on-road kits available do not come with bodies, and the ones that do, come with a Grand Prix-type body. For this reason, we thought it would be helpful to provide you with a comprehensive listing of the most recent stock car body offerings from the various R/C manufacturers. Included are Grand National, Outlaw, and Modified bodies. Read and reap!

## 1/10-Scale Bodies

### PARMA



#### '83 NASCAR Monte Carlo

Cover your  $\frac{1}{10}$ -scale racer with this stylish '83 NASCAR Monte Carlo body from Parma. Order No. 10208.



#### A.S.A. Mustang

For all you die-hard Ford fans, Parma offers a  $\frac{1}{10}$ -scale A.S.A. Mustang body for on- or off-road racing. Order No. 10207.



#### A.S.A. Dodge Daytona

This Dodge Daytona is ideal for on- or off-road  $\frac{1}{10}$ -scale racing. Order No. 10219.



#### '86 NASCAR Monte Carlo

Parma now offers an '86 Monte Carlo body in  $\frac{1}{10}$ -scale for Chevy NASCAR fans. Order No. 10236.



#### Outlaw Wedge Body

Try this Outlaw Wedge body from Parma for your  $\frac{1}{10}$ -scale racer. Order No. 10217.



#### A.S.A. Buick Regal

Join the Buick Team with this  $\frac{1}{10}$ -scale A.S.A. Regal body from Parma. Can be mounted to almost any on- or off-road R/C car with the use of Parma's Body Mounting Kit. Order No. 10211.



# McALLISTER



## Corvette Body

This race-bred body works great for pavement racing or dirt ovals. A must for the Corvette lover. Suggested retail price: \$18. Order No. B-104.



## Outlaw T-Bird Body

Big Brother to the 1/12-scale Outlaw T-Bird. Concours and race winner at many oval tracks around the country. Suggested retail price: \$19. Order No. B-113.



## Olds Fastback Stocker

This body has been awesome on the high-banked paved ovals and was the Pro Class winner in the Florida Grand National Championship. Suggested retail price: \$19. Order No. B-114.



## Wedge Mustang Body

If your blood rushes over outlaw wedge stockers, this body will lead the way to the winner's circle. Suggested retail price: \$19. Order No. B-115.



## Wedge Vette Body

Winner of the prestigious JG Oval. Suggested retail price: \$19. Order No. B-111.



## '88 Pontiac NASCAR

'88 Pontiac Grand Prix in 1/10 scale. GM pulls out all the stops to combat the Fords in '88. Order No. B-5.



## Prototab Camaro Body

This new 1/10-scale GTO road racing Camaro body brings the excitement and realism of contemporary road racing to 1/10-scale tracks around the country.

## MRP



## A.S.A. Camaro

The A.S.A. Camaro is ideal for off-road oval racing. This body is also outstanding for 1/10-scale on-road oval or circuit racing. Order No. 30-1109.



## Pontiac Fiero

The Pontiac Fiero has been updated and now sports the newer "ground effects" nose. The new nose should offer a little better steering. Order No. 50-957.



## Thunderbird Body

Join the NASCAR ranks with the 1987 T-Bird body for the GP-10. Will fit other 1/10-scale on-road chassis. Order No. 30-1124.



## Pontiac

New from MRP is Pontiac's latest contender on the NASCAR circuit. This body is available in 1/10-scale and will fit the GP-10 or many other 1/10-scale on-road chassis. Order No. 30-1123.



## A.S.A. Capri

By popular demand, MRP has added the 1/10-scale A.S.A. Capri to its off-road oval line. The A.S.A. Capri joins the A.S.A. Camaro, which has been one of the most popular bodies in the fast-growing field of dirt oval racing.





### Monte Carlo

The dynamite Monte Carlo SS body will join MRP's line of 1/10-scale Grand National bodies. Fits the GP-10 and many other 1/10-scale cars using an on-road chassis. Order No. 30-1124.



### Super Stock

The 1/10-scale Outlaw Wedge Super Stock body from MRP gives maximum downforce for handling and traction. It can be mounted on any 1/10-scale two- or four-wheel-drive off-road car.



### Pinto Super Modified

On-road or dirt ovals around the country feature these low-budget, big-bore, circle burners. This lightweight yet strong Lexan body has plenty of room and will fit most any off-road, and any 1/10-scale on-road cars. Order No. 30-1104.



### Corvette Dirt Tracker

Add a new twist to your oval dirt racing with the Corvette Dirt Tracker body from BoLink. Suggested retail price: \$17, \$25 painted. Order No. BL-2395.

## BOLINK



### Firebird Body

The BoLink A.S.A. Firebird body is ideal for dirt-oval racing. Available in clear Lexan or painted. Suggested retail price: \$17, \$25 painted. Order No. BL-2392.

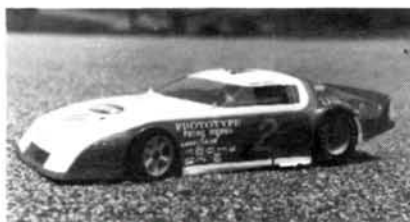


### T-Bird NASCAR

This '83 Ford Thunderbird body is designed to fit your 1/10-scale on-road racer with little or no modification. Available in clear lexan or painted. Suggested retail price: \$17, \$25 painted.

## 1/12-Scale Bodies

## BOLINK



### A.S.A. Camaro

This late-model A.S.A. Camaro body is designed to fit your 1/12-scale on-road racer. Body is available in clear lexan or painted. Suggested retail price: \$11, \$17.50 painted.



### Firebird Outlaw

Add a new twist to your 1/12-scale on-road racer with this Firebird Outlaw body from Bolink. Available in clear lexan or painted. Suggested retail price: \$11, \$17.50 painted.



### Buick NASCAR Body

Dress up your 1/12-scale on-road racer with this Buick LeSabre NASCAR body from Bolink. Available in clear lexan or painted. Suggested retail price: \$11, \$17.50 painted.



### Greenwood Vette

BoLink's Greenwood Vette GT body is available in clear Lexan or painted. Suggested retail price: \$11, \$17.50 painted. Order No. BL-2002.



### Camaro Body

Styled after the '83 I.M.S.A. Camaro, this body is sure to be an eye-catcher. Available in clear Lexan.



### '76 Olds Cutlass NASCAR

This 1/12-scale Oldsmobile body is designed after the 1976 Cutlass NASCAR machine. The body is formed of clear lexan and is available in clear or painted. Suggested retail price: \$11, \$17.50 painted.

## McALLISTER



### Outlaw T-Bird

This Bird will turn heads as fast as it does lap times. Suggested retail price: \$12. Order No. B-99.



### '85 Olds Body

'85 Olds Grand National stocker. 1/12-scale oval racing body. Order No. C-2.



### Olds Fastback NASCAR

The sleekest fastback on the Winston Cup circuit. Suggested retail price: \$12. Order No. B-110.



### '88 Pontiac NASCAR

1/12-scale '88 Pontiac Grand Prix. NASCAR Winston Cup stocker. Winner of 1/12-scale Invitational A Main at Whippoorwill. Order No. C-8.

## PARMA



### 1986 Monte Carlo Body

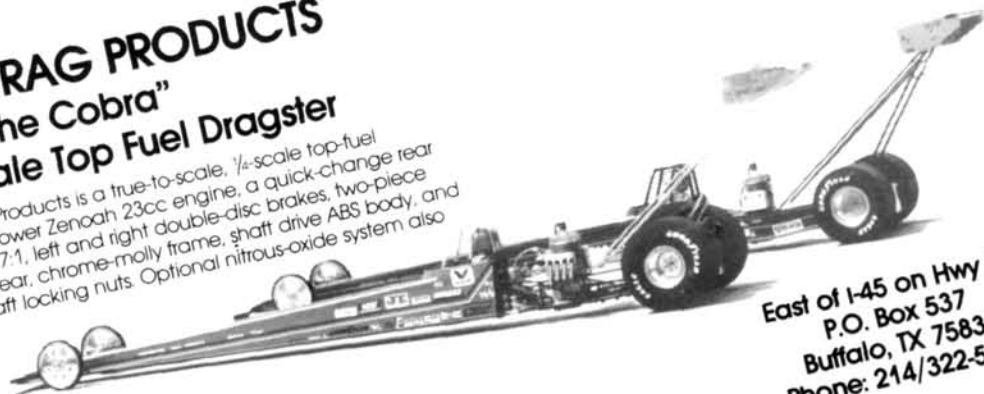
Parma now offers a 1/12-scale reproduction of the 1986 NASCAR Monte Carlo body. Available in clear Lexan, this body will fit any 1/12-scale car with the use of a Parma Universal Body Mounting Kit. Suggested retail price: \$11. Order No. 1955.

## PERFORMANCE DRAG PRODUCTS

Home of "The Cobra"

### World's Fastest 1/4-Scale Top Fuel Dragster

The Cobra from Performance Drag Products is a true-to-scale, 1/4-scale top-fuel dragster. The kit features a 3-horsepower Zenoah 23cc engine, a quick-change rear end with ratios ranging from 1:1 to 7:1, left and right double-disc brakes, two-piece spun-aluminum wheels front and rear, chrome-molly frame, shaft drive ABS body, and stainless-steel hardware with aircraft locking nuts. Optional nitrous-oxide system also available.



East of I-45 on Hwy 79  
P.O. Box 537  
Buffalo, TX 75831  
Phone: 214/322-5340



# FULL SCALE



*Richard Petty cruising down pit lane.*



## NASCAR

*Big names riding the thoroughbreds of stock car racing.*

by RICH HEMSTREET

**D**ALE EARNHARDT, Richard Petty and Ricky Rudd earn their living driving stock cars on the NASCAR Winston Cup (formerly Grand National) Circuit. These drivers enter 29 races each season. The cars they drive are supposed to look like the ones you and I drive on the street. But, beneath the sheet metal, these cars are pure racers.

All the cars are front-engined with rear-wheel drive. They have tube frames and heavy-duty roll cages. While the body and engine must be from the same manufacturer, the chassis components are nearly identical in all the cars. We, as R/C racers, can switch from a T-Bird body to a Pontiac body in a few seconds, but that would involve changing the body and drivetrain for a NASCAR team. However, teams can switch from an Olds body to a Pontiac body, just by changing the sheet metal, because the GM corporate drivetrain is the same for all.

The engines are limited to approximately 360 cubic inches with one four-barrel carburetor. These powerplants produce roughly 600hp. That's enough power to propel these 3,700-pound cars at 200mph on the superspeedways. At those speeds, aerodynamics play a major role in both speed and

*(Continued on page 62)*



*Top, NASCAR's stock cars, painted up in bold colors, all in a row. Above, Ricky Rudd's Motorcraft pit crew, servicing his car.*





**EXCLUSIVE**

**MODEL EXPO**



**COORS/MELLING**

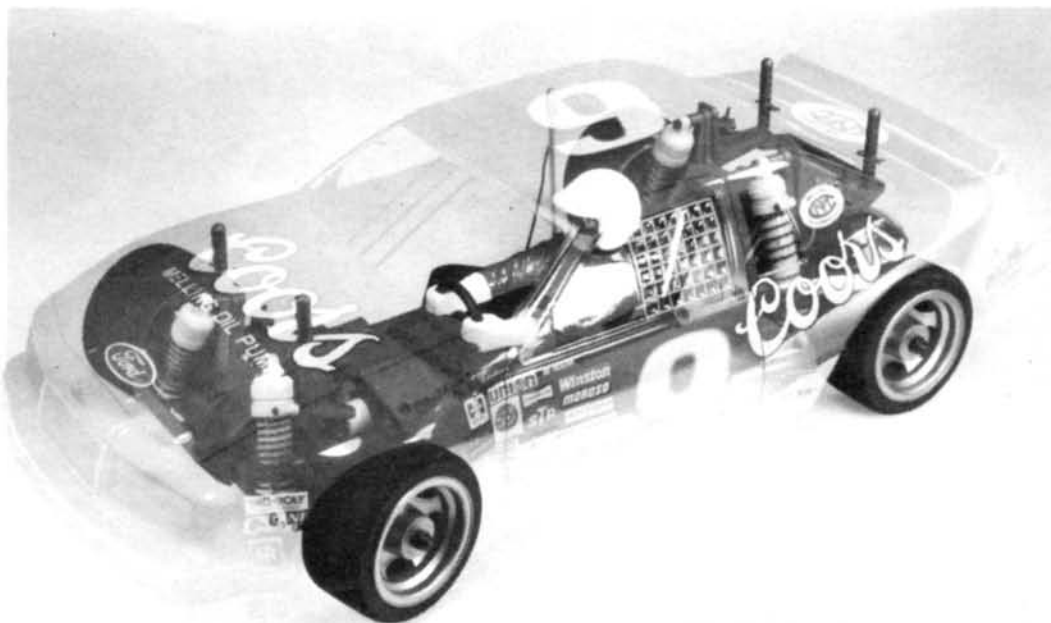
# THUNDERBIRD

by STEVE POND

**I**N OUR EFFORT to bring you the latest information, the staff of *Radio Control Car Action* has uncovered another unique vehicle which will soon join the ranks of R/C cars. This latest entry is the Coors/Melling Thunderbird stock car from Tokyo Marui.

What makes this four-wheel-drive racer different is the fact that it is completely adaptable to any type of terrain, ranging from the smoothest superspeedway to the roughest off-road track, without compromising performance. This is possible with unique body and suspension height adjustments. For racing on-road, the body and suspension are lowered to hug the track. For racing off-road, the body and suspension are raised, and the off-road tires (included in the kit) are used in place of the on-road slicks. During the short period that we had the car in the office for photos,





*The new Coors/Melling Thunderbird from Model Expo featuring 4-wheel-independent suspension, oil-filled coil-over shocks, shaft drive, and adjustable body mounts to raise or lower the body for on- or off-road use.*

we had the opportunity to give it a quick run on the pavement. The car handled very well for a vehicle that is adaptable to so many different types of terrains.

Don't count it out on the off-road track either. The chassis is based on the race-proven design of the Marui Ninja which is more than capable of holding its own in the dirt. The chassis is of the tub type with a four-wheel shaft drive system featuring full-time four-wheel drive, gear differentials front and rear, oil-dampened independent suspension at all four corners, and a Mabuchi RS-540S motor. An assembled speed controller is also included in the kit. To cover the chassis, there is a Thunderbird body formed of tough polycarbonate and fashioned after the popular Grand National-type race cars. The decal sheet provided is designed after the popular Coors/Melling-sponsored Ford Thunderbird driven by Bill Elliot, one of the hottest drivers on the NASCAR circuit. This sheet also includes all the small sponsor decals which appear on the full scale car.

It's obvious that a great deal of forethought went into the Marui Thunderbird. The assembly of

the kit is organized in such a way that it will not intimidate the enthusiastic R/C novice. The same may be said about the performance of the car. In stock form, the car is fast enough to be competitive, but not so fast that those with an untrained hand won't be able to handle it.

The Coors Thunderbird is not something you'll leave behind as your driving skills become more finely tuned. The car was designed to allow the use of high-performance motors, electronic speed-controllers and other high-performance accessories, once you've passed the beginner stage. Another feature worth mentioning is the tremendous versatility of the Marui Thunderbird's design. It allows the enthusiast to reap the rewards of on- and off-road racing, or just to bash around the yard or parking lot. Whatever your particular forte the Marui Coors/Melling Thunderbird can meet your needs and possibly introduce you to a new type of racing or recreation.

Stay tuned for a full-blown track report on this car in the near future.

*The following is the address of the U.S. distributors of the manufacturer mentioned in this article:*

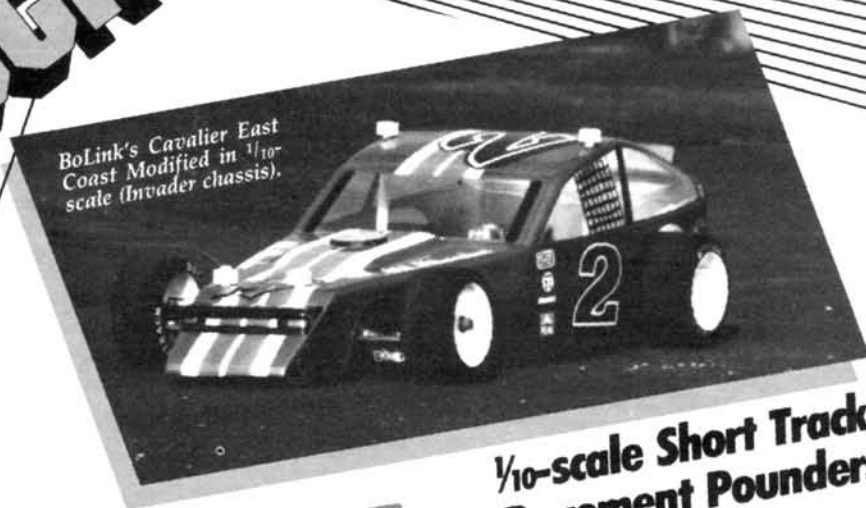
*Model Expo Inc., 23 Just Road, Fairfield, NJ 07007. ■*

# MODIFIED STOCK CARS



by RICH HEMSTREET

BoLink's Cavalier East Coast Modified in 1/10-scale (Invader chassis).



## 1/10-scale Short Track Pavement Pounders

**W**HEN BILL ELLIOTT and Bobby Allison wheel their NASCAR stock cars onto the high-banked, 2.66-mile, Talladega superspeedway, they are driving the fastest stock cars in the world. But what happens when Elliott and Allison show up at Martinsville's half-mile short track? Are they still piloting the fastest stock cars on the track? No way! NASCAR stock cars are out of their element on the short tracks. The fastest stock cars on the short tracks are called "modifieds."

Modifieds appear to be a cross between a sprint car and a stock car. While the drivers are safely enclosed inside the cockpit, the tires hang out, fully exposed. These cars are raced primarily in the eastern and midwestern USA.

Modifieds race both on paved and on

BoLink's chopped and lowered '40 Ford on Round-track chassis.







dirt ovals. The pavement cars have a much lower profile and have enough stock sheet metal (roofline) to identify the car as a Chevy or a Ford. The dirt cars have evolved a semi-aerodynamic shape most closely resembling an old AMC Gremlin.

Both types of bodies are available for radio control racing. As  $1/10$ -scale on-road racing grows, especially on the ovals, I hope more clubs will look at running a modified stock car series. These bodies handle well and open-wheel, oval racing is a challenge.

For pavement racing, I used the  $1/10$ -scale BoLink\* Cavalier East Coast Modified, and I cut down a  $1/10$ -scale BoLink '40 Ford to make an older version modified coupe. The Cavalier was mounted on a BoLink Invader chassis while the Ford was mounted on a Roundtracker.

The dirt track modified is a Parma\* AMC Spirit body. I mounted this body on a Kyosho\* Ultima, and added some Grand Prix tires and wheels from Advance Engineering\*. These cars may look strange, but they are quick on the short ovals. If you want some fun racing, while running cars easily identified by

spectators, try modified at your next oval race.

Some people think of modified as stock car/sprint car hybrid aberration. I think of them as wildly different and a refreshing change of pace. So, give them a try!

\*The following are the addresses of the companies mentioned in this article:

BoLink R/C Cars, 420 Hosea Rd., Lawrenceville, GA 30245-4695.

Parma, 13927 Progress Pkwy., N. Royalton, OH 44133.

Kyosho, Box 4021, Champaign, IL 61820.

Advance Engineering & Mfg. Co., 180 S. Hwy. 67, Unit G, P.O. Box 766, Woodland Park, CO 80866. ■

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# Go FAST AND TURN LEFT!

**Stock Car Blitz**



Like their stock car cousins, the 1/6-scale sprinters are also built to go fast and turn left on dirt.



Joel Johnson, coming out of the tri-oval at Whippoorwill.

by RICH HEMSTREET

**W**HAT ARE THE two most important full-scale races each year? The Indianapolis 500 and the Daytona 500.

Neither a Can-Am car nor a right-hand turn is in sight at either event. All you can see are cars going fast and turning left.

To me, the NASCAR Stockers running at Daytona, and almost any other class of stock cars running on any size oval track, are far more exciting than any roadcourse race you can name. What makes racing exciting is cars running side-by-side through the turns, and fighting for the lead. When cars are able to pass anywhere on the track, it makes for close competition.

Lake Whippoorwill International Speedway is the Daytona of radio-control racing. Several similar tracks are being built, with some already in operation. These high-banked ovals are designed for classic flat-out racing. While there may be a quickest line around each track, the banking of the turns makes passing possible anywhere.

Are ovals easier to drive? Yes and no. Yes, it is easier to drive more consistently around an oval than around a roadcourse, without hitting the walls. This is partly because there are only two, three or four turns on an oval. If you had a four-turn roadcourse with long straights it would also be much easier to drive than a twelve-turn roadcourse.

However, the answer is also "No." The speeds reached on an oval are much higher than the speeds reached on a roadcourse of the same length. This

**All-Out High-Banked Ovals, Ala Daytona, Are Becoming The Wave Of The Future In 1/10- and 1/12-Scale Racing.**

means you have to concentrate more and be aware of what is ahead of you. There is also more traffic on an oval. Because the cars run without having to be marshalled very often, the track always appears to have traffic ahead of you and behind you. Even when cars are marshalled, they are right in the thick of the action, though they may be a lap or two down.

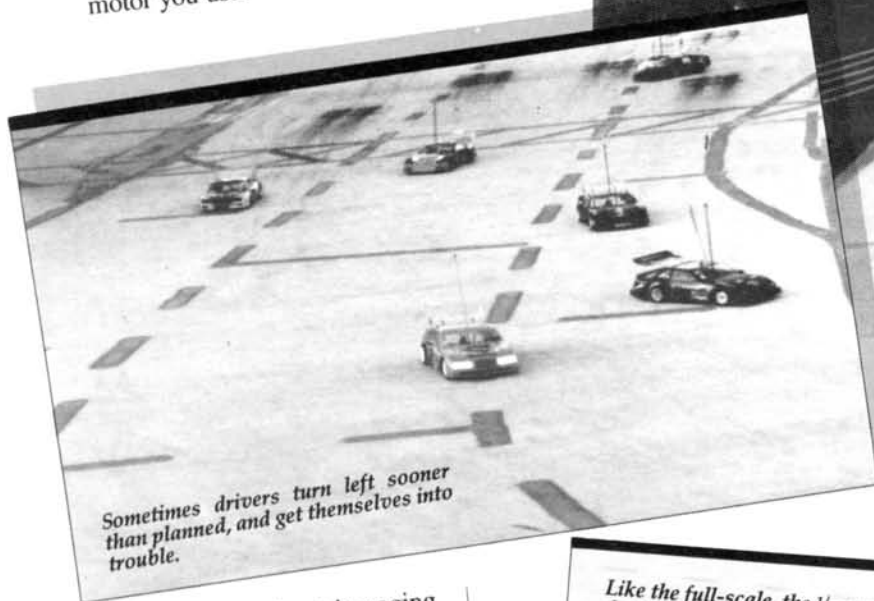


With lap times on ovals ranging from 4 seconds (for a short track oval) to 8 seconds (for the slowest cars running at Lake Whippoorwill), you can see how hard it is to get cars strung out. By the time you build up a lead on another car, you have to start planning on trying to lap him. If you are falling off the leader's pace, you will soon see him on your rear bumper. Actually, R/C oval-track racing is even better than some full-size super-speedway racing, where drivers can sometimes build up large leads (most likely to happen at the Indy car races).

Doesn't the guy with the fastest motor always win? No more often than he does on a roadcourse. In fact, because of the higher speeds, the chassis set-up is even more critical than on a roadcourse. At Lake Whippoorwill,  $1/12$ - and  $1/10$ -scale drivers also have to learn about aerodynamics to get their cars around the track. If you don't use a wing or a spoiler, your car won't win, no matter how fast a motor you use.



BoLink's AMB lap-counter kept everyone honest.

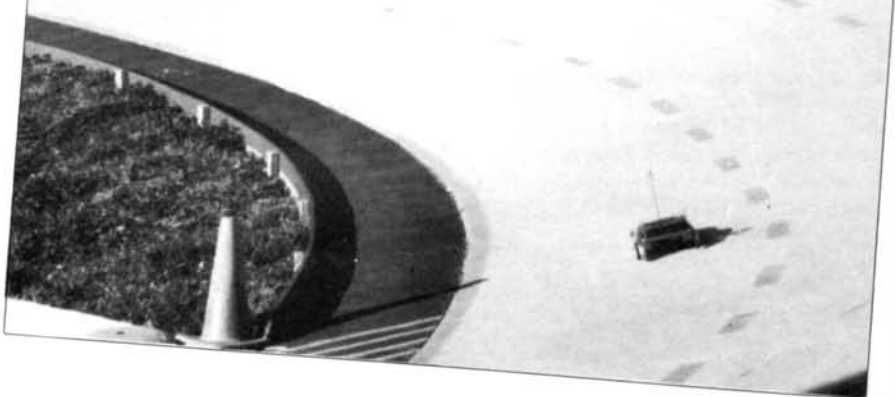


Sometimes drivers turn left sooner than planned, and get themselves into trouble.

Lots of racers worry about damaging their cars in oval racing. It's even reported that ROAR could not get enough racers to run a National Oval Track Championship because these modelers didn't want to break their cars! Be brave! It's been shown that  $1/12$ - and  $1/10$ -scale cars hold up well at 40mph on high-banked ovals, the  $1/8$ -scale gas sprint cars are working well on dirt ovals, and the  $1/4$ -scale cars are racing on both paved and dirt ovals. Some clubs have even taken the bold step of running their  $1/8$ -scale road racers on paved oval tracks with stock car bodies.

Racers around the country are starting to see that going fast and turning left is where it's at. It's also the direction of growth for radio-control cars. If you haven't tried it yet, take the plunge; you'll like it.

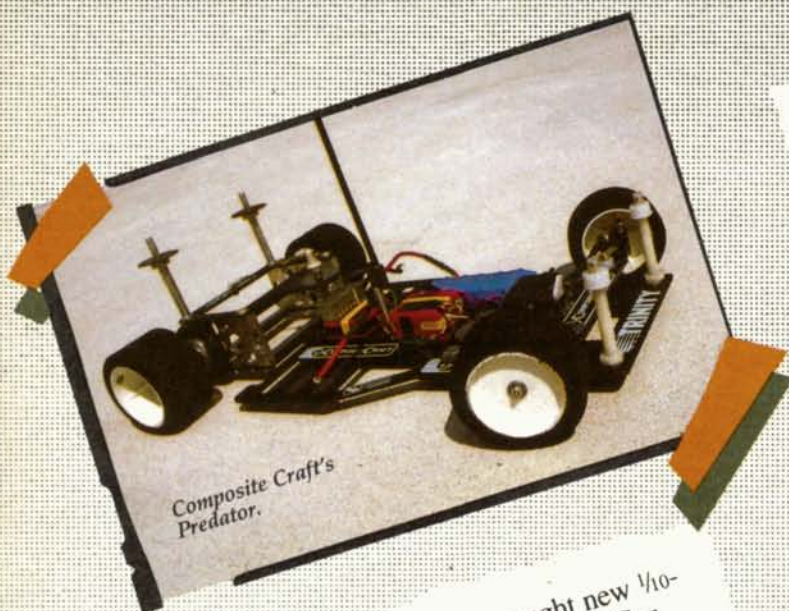
Like the full-scale, the  $1/10$ -scale oval track is designed for high speeds as can be seen from this angle.





# THE HOTTEST FIVE SUPER SPEEDWAY CARS

by STAFF



Composite Craft's  
Predator.

**S** EVEN MANUFACTURERS brought new  $\frac{1}{10}$ -scale, on-road cars to the Radio Control Car Action Weekend. At the time of the race, none of the new cars was in production, and these cars were getting their final test against top competition. So, the question now being asked is what were the five hottest  $\frac{1}{10}$ -scale, on-road cars at Lake Whippoorwill Speedway?

BoLink's\* new Eliminator 10 captured everybody's attention when fifteen-year-old Steve Swindle drove his to TQ honors in the  $\frac{1}{10}$ -scale Invitational class. During the four rounds

of qualifying, Swindle was the only driver to break the 45-lap barrier in five minutes.

The Eliminator 10 looks like an enlarged version of the new BoLink Eliminator 12 car. The front end features independent springs while the rear has a T-bar system for flex. The car uses a saddle-pack battery set-up. BoLink tells me the car will be available with either a graphite or a fiberglass chassis.

TRC\* introduced their new Pro 10, with Bud Bartos driving it to victory in the Pepsi Challenge,  $\frac{1}{10}$ -scale Invitational A-main. Bartos teamed with Dave Hechler to drive the Pro 10 to victory in the Novak



Parma's new car, unnamed,  
has a fiberglass chassis.



600. This car will look very familiar to anyone who's seen the TRC Pro 12. The car was ready only a week before the race, but appeared to be easy to dial in.

The Composite Craft\* Predator was once the car to beat on the superspeedways. While this car is no longer dominant, it remains very competitive. Obviously, the Predator was the car all the others were gunning for. A Composite Craft team captured second place in the Novak 600, and Jeff Davis finished second in the Invitational A-main driving a Predator. The Predator has a graphite chassis with independently-sprung front suspension. Like most of these cars,



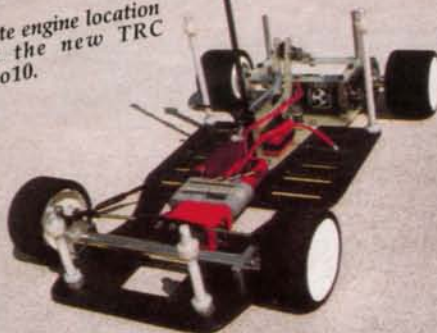
BoLink Eliminator 10 already making a name for itself.

there is a flexible T-bar in the rear.

The Parma\* team showed up with only two new, as-yet-unnamed cars. While short on numbers, the cars gave impressive results, since both qualified for the ten-car, Novak 600 field. In fact, they qualified for the Invitational A Main as well, with Andy Dobson finishing third. This was Dobson's first oval-track race. The Parma car was made from fiberglass and looked like an enlarged 1/12-scale car. The T-bar rear and independent front end was similar to the other cars I've mentioned, and this car should be on the market soon.

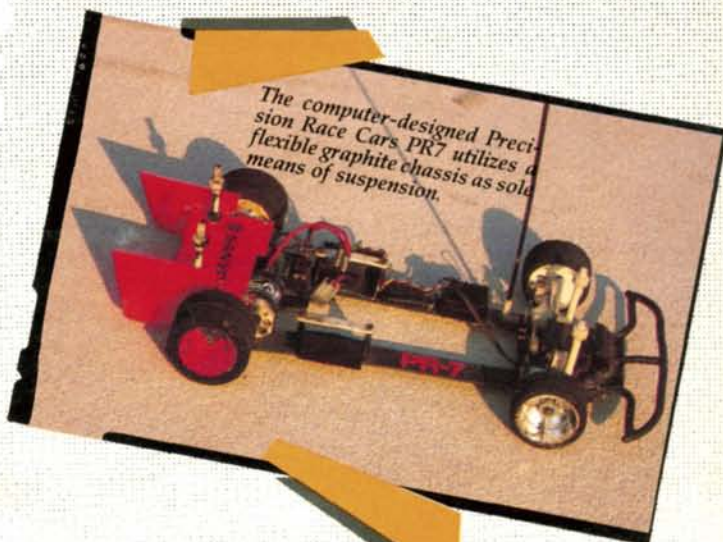
The fifth hottest car was the most different, and also appears to be the simplest. The Precision Race Cars\* PR7

Note engine location on the new TRC Pro10.



features a perimeter frame chassis, and was computer-designed with all the suspension built into the flex of the graphite chassis. There is no other suspension on the car. Obviously, this car either works or it doesn't, and results show that the car works. While none of the Invitational drivers was using the PR7, several amateurs were. The three PR7s qualified for the Pepsi Challenge 1/10-scale modified A-main. Precision Race Cars is a small company just starting to produce cars. The PR7 is a car for the racer who doesn't want to

(Continued on page 90)



The computer-designed Precision Race Cars PR7 utilizes a flexible graphite chassis as sole means of suspension.



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by Phil Sroka

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## TRC PRO-12

(Continued from page 24)

This motor is based on the popular Yokomo setup and is precisely hand wound. I don't know exactly how it's wound, all I can say is that free-revving at 6 volts was pulling about 6 amps, and that's hot!

All of this power was transmitted through Team Losi\* 64 pitch gears, 19-tooth on the pinion and 100-tooth on the spur gear. Speed was controlled with a Novak Electronics\* No. 1 speed control which handled the hot current without a problem. On top of this was a BoLink\* '83 T-Bird body. I chose this body because of its smooth aerodynamic lines.

Finally, one of the most helpful ingredients was the original prototype of the Bud's Racing Products Bi-level Super Wing No. 5237. This wing is unique in the fact that it has two levels, similar to Formula I or Indy cars. The top wing is adjustable, allowing it to be run at a very shallow angle. This produces very little drag with tremendous down-force and true high-speed stability.

There you have it. A glimpse of the world's fastest lap by the world's fastest car.

*\*The following are the addresses of the companies mentioned in this article:*

BoLink R/C Cars, Inc., 420 Hosea Rd., Lawrenceville, GA 30245.

Bud's Racing Products, P.O. Box 601, Amherst, OH 44001.

Composcraft, Inc., 2400 Sand Lake Rd., Orlando, FL 32809.

Novak Electronics, 128-C East Dyer, Santa Ana, CA 92707.

Reedy Modifieds, c/o Associated Electric, 3585 Cadillac Ave., Costa Mesa, CA 92626.

Team Losi Performance, 1655 E. Mission Blvd., Pomona, CA 91766.

TRC/Cam Pro Motors, P.O. Box 478, Oakboro, NC 28129.

Trinity, 1901 E. Linden Ave. No. 8, Linden, NJ 07036. ■

## PETTY STOCKER

(Continued from page 28)

going to be the right size for this car. By using techniques similar to those already described above, a logo in an advertisement was enlarged and reduced to the proper dimensions for the hood and quarter-panel graphics. This was constructed with white, red and dark blue MonoKote. As you'll see in the photos, the results are striking. Most other number sets and logos could be produced the same way, using the wide range of colors available from Top Flite.

(Continued on page 60)

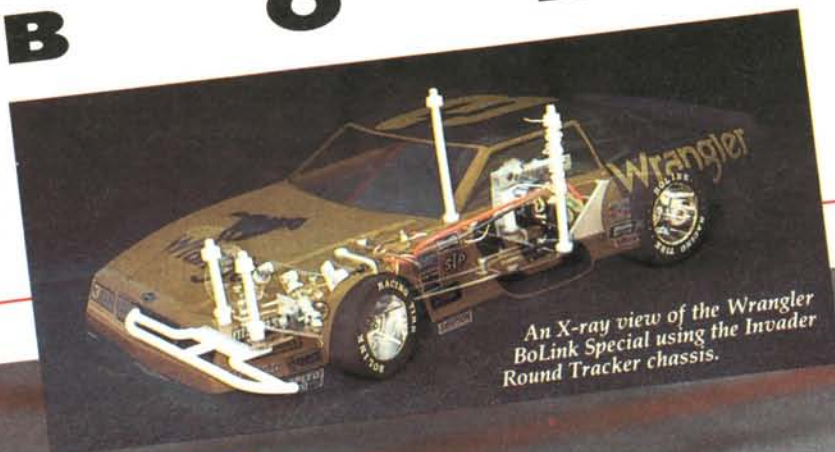




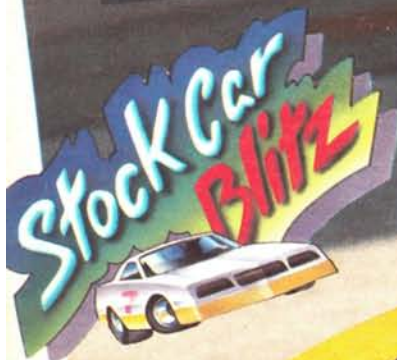


# B O L I N K

DALE ERNHART'S 1987  
NASCAR CROWN  
WINNER IN 1/10-SCALE.



An X-ray view of the Wrangler BoLink Special using the Invader Round Tracker chassis.



by T.J. LYN  
Photos by Steve Pond and Ken Hively.

## ONE WRANGLER TENTH MONTE CARLO

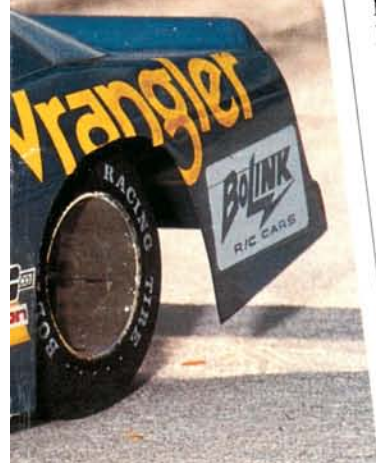


The Futaba Magnum Jr. sends the radio signals to our super-speedway competitor.

**T**HE 1987 NASCAR championship was the icing on the cake for Dale Earnhart and the Wrangler/Loctite racing team. A NASCAR crown is the dream of many stock car drivers and is just that—



With the help of many  
onal sponsors like Loctite,  
Dale Earnhart Monte Carlo  
1/10-scale crown winner.



a dream—for you and me as we watch the “big boys” from the grandstands or on national TV. However, with the expansion of R/C racing to the scale superspeedways that dream is coming very close.

The full-bodied Grand National stock cars are sleek, aerodynamic and carry major sponsorship labels and colors—billboards traveling at 200mph! With the help of Bolink\*, MRP\*, Futaba\*, Trinity\* and Loctite\* you can build a superspeedway performer to dazzle the spectators and the competition.

Our starting point is the Bolink Invader 1/10-scale race car with racing suspension. The Invader suspension car includes fiberglass chassis components, independent front end with oil-filled shocks and adjustable coil-over springs, a T-plate rear-end design with aluminum motor and axle mounts, and a single rear shock to control rear flex and ride height. The car also has a stainless steel axle attached to a ball differential, and on-road racing tires mounted on lightweight nylon wheels.



The Futaba MC-11 electronic speed control is capable of handling either 6- or 7-cell performance.

Assembling the Invader was easy, using the Bolink numbered parts bags and clear instructions. My only innovation was:

the use of something also used by Dale Earnhart's championship racing team: a 242 Threadlocker from Loctite. In the Invader the threadlock compound is used on all screws which are not secured by a nylon lock-nut. These areas include the aluminum motor and axle mounts, the rear shock mounts, and front shock towers. The threadlock will prevent screws from working loose owing to the track vibration which can develop when these superspeedway machines reach top speeds of over 50mph.

I chose a Futaba Magnum Junior radio system, an MC11B electronic speed control capable of handling either 7.2V or 8.4V battery packs, and a Futaba FP-S35S steering servo. This mini double ball bearing unit provides the ultimate in high-speed and high-torque steering response. The power plant of



The Trinity Monster Horsepower provides us with the Davis wind specially designed for superspeedways.



Loctite Safety Solvent and 242 Threadlocker are a must for all racers.

choice for the Earnhart/Loctite race car is the Trinity Whippoorwill wind-modified. This is one of the new Trinity power plants designed for the superspeedways and I'm sure it will be a real winner. And, while we're on the subject of motors, Loctite offers another handy product—a safety solvent cleaner and degreaser which can be used for those quick motor cleanings between rounds.

The final dressing to the Dale Earnhart stock car comes in the form of an MRP Monte Carlo body and a sheet of Parma's oval track decals. The major sponsorship labeling and numbering can be traced and cut from MonoKote in the color you need to imitate your full-scale favorite. The Parma oval-track decal sheet provides most of the other sponsor decals which you'll need for the track-ready product.

NASCAR superspeedway racing is  
(Continued on page 102)



Track Report

ARISTO-CRAFT/HITEC



**A 1/10-SCALE OFF-ROADER WITH  
MANY FEATURES NOT FOUND  
IN OTHER READY-TO-GO CARS.**

by T.J. LYN

Photos by Steve Pond and Ken Hively.

**M**ANY COMPANIES bill their radio-control vehicles as ready-to-run, but there is always some assembly needed to have the car complete and on the road. The Kangaroo is the only truly complete ready-to-run R/C car I've ever come across, and I emphasize that this is *not* a toy-store-grade car. With the Kangaroo, Aristo-

Craft\* has taken the word "complete" literally by not only including the radio system, installing it and providing you with a fully assembled car, but also including an electronic solid-state speed control with the package. All you have to do is provide eight AA batteries for the Challenger 250 two-stick radio, and a 7.2V Ni-Cd pack for the car and you're ready to run. Up front, the Kangaroo features a



double swing-arm suspension with a mono oil-filled aluminum damper and adjustable coil spring. The extra-wide rib-front tires are mounted on lightweight one-piece wheels all protected by a full-width bumper. As we move toward the rear of the vehicle on the open frame rail-type chassis, there's a pair of nerf bars to help protect the battery and the main chassis structure. The rear suspension of the Kangaroo comprises trailing-arm assemblies and oil-filled shocks with adjustable oil-filled coil-overs. This type of assembly, with the shocks mounted horizontally, allows for maximum off-road performance. The new differential is a multi-gear assembly that is metal-encased and prevents the bevelled gears from flexing and stripping. The beefed-up diff is available separately so earlier Kangaroos may be upgraded. While we are on the subject of options, Aristo-Craft can even provide the Kangaroo with a complete ball bearing kit to upgrade the stock bushing if you need optimum performance.

The rear tires are mounted on lightweight one-piece rims, and the tire itself has a v-spiked design giving good off-road traction in both wet and dry conditions. Above it all is a yellow lexan body and wing that only requires your imagination for final dressing, whether you choose to use the kit-provided decal sheet or the paint of your choice.

With decals in place for added color, the AA batteries installed in the Challenger 250 radio, and a charged 7.2V racing pack in hand, the test track is the next stop. Note that I used the flat, racing-pack type battery, and I recommend this for easy and hassle-free changing. Also, make sure that the battery is equipped with a Kyosho-type connector, that is, the female side of the connector is on the battery side of the system, because the male side is pre-installed on the Aristo-Craft speed control.



Aristo-Craft Charge-a-matic peak-detection unit.

The Challenger 250 radio is a nice, compact transmitter, easily controlled by even the smallest of hands—a perfect size for the beginner. The radio's "on" and "off" indicator lights are centrally positioned and highly visible. This, once again, is an ideal set-up for the entry level R/C enthusiast.

The Kangaroo's performance was surprisingly strong. The Mabuchi 540 motor powered the car with very good authority and kicked up a healthy amount of dirt off-roading. The off-the-line power was also impressive, with the Kangaroo even getting the front wheels airborne from a standing start on the pavement, and that was with the stock off-road spiked tires.

The Kangaroo weighed in at a light 3 pounds 2 ounces, with most of that weight in the rear half of the vehicle, and this contributed to the Kangaroo's giving a lot of understeer in high-speed cornering. With most of the weight to the rear of the car, the front end is very light and steering response was lacking until throttle was decreased. To get the suspension on this light-nosed car to work on rough surfaces it is necessary to set the front spring in the lightest setting. Further, when the car sits overnight the shock piston-shaft o-ring seals stick to the shaft. When the shocks are fully cycled, up and down, the first time, they're fine for a day's running.

Overall, the Kangaroo is a great entry-level car for the first-time hobbyist. It was a fun car to drive, and the most complete ready-to-run vehicle I've seen, apart from toy-grade R/C cars which are not in a class



The Kangaroo comes complete and ready to run and includes an Aristo-Craft electronic speed control.

with this vehicle.

\*For more information on Aristo-Craft's products write to:

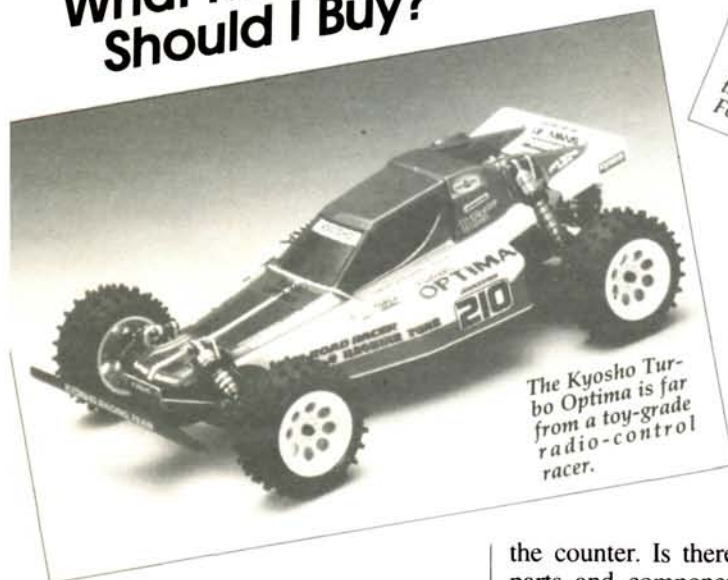
Polk's Modelcraft Hobbies, 346 Bergen Ave., Jersey City, NJ 07304.



# Troubleshooting

by FRED MURPHY

## What Kind of Car Should I Buy?



The Kyosho Turbo Optima is far from a toy-grade radio-control racer.



Tyco offers many entry-level ready-to-run radio-control cars like their Formula 1 Turbo.

**I** OFTEN RECEIVE letters from readers asking what is probably the most difficult question to answer about radio-control cars: "What kind of car should I buy?" My answer is always: "Good Question!" The R/C car market is flooded with products and the choices are almost endless. Your decision as to which kind of car to purchase could determine how long your interest in R/C cars will last, and may affect the longevity of the radio control industry as a whole. So let's take a long, hard look at the decision you're going to make, and I'll give you some ideas on how to reach this major decision.

First, I recommend that you look around the area you live in to see what R/C equipment your friends and neighbors have bought. Ask them how they arrived at their decisions. Next, go to your local hobby dealer and take a look around the store. What kind of R/C cars does he carry? Off-road? On-road? Kits? Ready-to-runs? After you've looked around the store, look in the display cases and behind

the counter. Is there a good supply of parts and components such as battery packs, motors, chargers, tires and wheels? Talk to the man behind the counter and ask him what's the hottest car in the area. Your local dealer is there to work with you so pick his brain and find out all you can about the products he sells.

By the way, don't forget to find out if there's an R/C race track nearby, because this is your next stop on your search for the car that's best for you. Find out where and when the races are, and stop by to watch what goes on. Take a look at the kinds of cars and equipment the racers are using, and ask their advice. They were once in your position, and I've yet to find a track where the people who use it or run it won't help you in your quest to choose a suitable R/C car. But remember, everyone has his own favorite, so perhaps you should carry a small note-pad to record any advice offered, as it will come in handy when it's time to make that final decision.

I'm sure that by this time you've taken in so much information that you're more confused than before you started the

search. So, sit back, take a deep breath and think about what you want to do with the car you buy. Do you want to run it around the backyard or around the school parking lot, or to ambitiously try your hand at the local racing facility whether it be off-road or on-road? With these questions answered, let's narrow your search, since you now have an idea of what you want to do with your car. A good source of information if you're still having a problem at this point is the 1988 *Radio Control Car Action Buyer's Guide*, which is available through your local *Car Action* magazine dealer or through this publication.

Once you've decided which vehicle you'd like—whether off-road or on-road—it's time to decide how much money you can



Rechargeable Ni-Cd battery packs are a good indication that the car will be a good performer.





The Traxxas Cat is available as a ready-to-run or in kit form.

spend. Please don't let money be the only factor in making your final choice. If you're a true newcomer to radio control, you might feel that a ready-to-run car is best for you, and it may very well be. However, make sure you consider the following points: if the car or truck you're looking at doesn't have a proportional steering and speed system, in most cases this is a tip-off as to the vehicle's overall performance. This means that the steering will not be as proportionally responsive to the steering stick on your radio transmitter as you might like it to be. This can be very frustrating to a beginner who's trying to learn the meaning of radio control.

Another thing to look for is whether the vehicle uses a 7.2-volt rechargeable Ni-Cd battery pack or a quantity of rechargeable AA batteries. If the latter, be able to hop-up these types of kits,

then chances are that the vehicle will not be as fast as you'd hoped, and your interest in radio control will go right out the window with the money invested.

You'll find that most of the R/C cars on the market using a 7.2-volt Ni-Cd battery pack also use a Mabuchi 540 motor that is the standard of the R/C car industry. This type of motor will give your car the speed that you saw at the local racetrack. The running time may be shorter than a car equipped with AA batteries, but if you obtain a quick charge the wait between runs will be only approximately 15 minutes.

Parts availability and service are other important factors to take into account. Most ready-to-run, toy-grade cars have been factory-assembled, and the main components can only be repaired by the manufacturer. The hobby-grade ready-to-runs will give you the flexibility of acquiring replacement parts and service from the local dealer, so keep this in mind.

If you decide to buy a car kit and it's your first assembly job, think seriously about getting an entry-level kit. All the major manufacturers like Tamiya (Hornet), Kyosho (Icarus, Cosmo) and Futaba (FX-10) offer kits which have detailed, clear instruction manuals for the novice. You'll find that in your home-built R/C kit the parts needed for repair will be easy to obtain and because you built it you know how to repair it if there's a problem. In addition to this, you'll also

whereas this will not be possible with many of the toy-grade R/C cars.

If you do build a kit yourself, *have patience and take your time*. Don't rush just to get the car running, because



The 1988 Buyer's Guide is your one source for all the radio-control car products you'll need.

chances are that you'll miss something and do more harm than good.

If you've taken the time to choose the car that's best for you, take that extra time to build your investment correctly, and today's enthusiasm will still be with you years from now. **GOOD LUCK AND HAPPY MOTORING!**

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## PETTY STOCKER

(Continued from page 50)

You may want to refer to my August '87 RCCA article, pages 108-109, entitled "Scale Logos For Your R/C Car." This gives additional tips on producing realistic logos for your R/C cars.

All NASCAR stock cars have their front fenders loaded with product decals and, to keep it neat and professional-looking, NASCAR even tells the teams where to put each one. By studying photos and going through a bunch of Autographics and Parma decal sheets, most were identified and applied to their correct respective positions. Black MonoKote material was used to simulate the headlight covers and grille areas, and automotive window-tint material was applied to the inside of the windshield (Petty has sensitive eyes, and is one of the few drivers using a tinted windshield).

The wheels and tires are AJ's No. 9725-1 sets by Twinn-K\*, with the "Eagle" lettering hand-painted to match the "Good Year" logo already on the tires. To give a more realistic appearance, the wheels were modified by removing some of the plastic on the inside diameter with a sanding drum attachment on a motor tool.

The chassis, in this case, is a warmed-over Hornet, with some suspension and power improvements to make the car a respectable oval-track performer. Several other chassis will work just as well, but just to be sure, build yourself a winner. A car like this will be expected to win. Truly a car fit for a king!

\*The following are the addresses of the manufacturers mentioned in this article:

Autographics of California, 1700 14th St., Bakersfield, CA 93301.

Parma International, 13927 Progress Pkwy., N. Royalton, OH 44133.

MRP, 18676-142nd Ave. N.E., Woodinville, WA 98072.

MRC Tamiya, 2500 Woodbridge Ave., Edison, NJ 08817.

Floquil Corp., Route 30 North, Amsterdam, NY 12010-9204.

Testor Corp., 620 Buckbee St., Rockford, IL 61101.

Official NASCAR Yearbook & Press Guide, published by UMI Publications, Inc., 1135 N. Tryon St., Charlotte, NC 28230.

Grand National Illustrated magazine, published by Griggs Publishing Co., P.O. Box 500, Concord, NC 28025.

Top Flite Models, 2635 S. Wabash Ave., Chicago, IL 60616.

Twinn-K, Inc., P.O. Box 31228, Indianapolis, IN 46231. ■



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## NASCAR

(Continued from page 36)

handling. The '86 Chevy Monte Carlo featured a sloping rear window designed to increase the downforce on the rear tires. The '87 T-Bird countered with a sleeker front end and a taller trunk lid to get the spoiler up in the airflow. Now GM is producing a new supersleek "10" series of bodies for their nameplates to use.

In the old days, NASCAR races were run on paved and dirt ovals. As the superspeedways were built, NASCAR moved on to them. Now the Winston Cup series takes place on all of the major superspeedways except Indianapolis Motor Speedway. They also continue to race on a number of southern shorttracks, and have three roadcourse races each season. Unfortunately, they don't run races on the dirt anymore.

The fuel capacity of the Winston Cup cars is limited to 22 gallons of gas, giving the cars a range of approximately 100 miles at racing speeds. Since the races are anywhere from 180 miles to 600 miles long, the drivers have to pit for gas several times during most races. The pit crews can fill the gas tanks and change two tires in under 30 seconds, time after time. The

(Continued on page 88)

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# Radio Control **CAR ACTION** W E E K E N D

HOSTED BY LAKE WHIPPOORWILL SPEEDWAY.

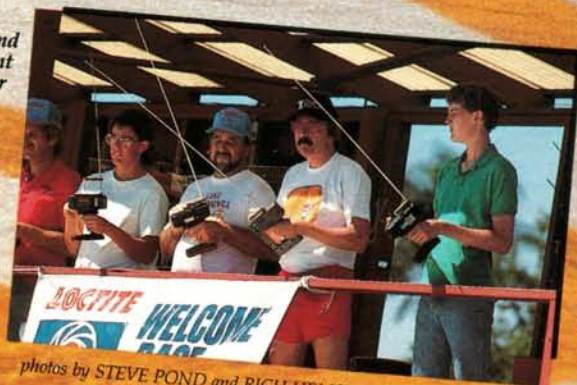
**A**N EVENT THAT SET AN INDUSTRY  
PRECEDENT FOR RACER PARTICIPATION,  
MULTIMEDIA COVERAGE, AND NEW  
PRODUCT INTRODUCTION.

by RICH HEMSTREET





Jan Limpach (second from right) recipient of the Top Amateur Driver award, dueling it out with the top contenders.



photos by STEVE POND and RICH HEMSTREET

**T**HE RADIO-CONTROL Car Action Weekend, featuring the Third Annual Pepsi Challenge, drew 180 entries to Orlando, Florida. This race for  $\frac{1}{12}$ - and  $\frac{1}{10}$ -scale stock cars has become the major racing event of the year. All the excitement was focused on the  $\frac{1}{10}$ -scale on-road cars, and seven manufacturers brought brand-new cars to race on the high banks of Lake Whippoorwill International Speedway. In case you haven't heard,  $\frac{1}{10}$ -scale on-road is where the action is.

Some manufacturers rented the track for testing; others sent equipment for local drivers to test. The Action Weekend started on Thursday evening with 14 Invitational teams running the Car Caddy Twin 125



One-tenth-scale off-road world champion, Joel Johnson, lends a hand to the McAllister Racing Team. Left of Joel is the "Motor King" Ernie Provetti of Trinity.





Prototab Camaro body from McAllister Racing.



The Surf Grand National car of Ray Lambert, Jr. took third place for best paint.



The TRC Pro 12 driven by Buddy Bartos matched its old record of 5.9 seconds during a grudge match with Jim Fuller.



The Team Associated RC-12L driven by Kent Clausen took second in the Reedy Top Gun run and first in the Pepsi Challenge.



Steve Swindle not only took first place in the BoLink Clash but also won first place in Concourse with this beautiful Thunderbird.

## Seven manufacturers brought brand-new cars to Whippoorwill International Speedway.



Qualifiers. On Friday evening, 10 amateur teams ran the Advance 100, followed by the Invitational teams running the Novak 600.

On Saturday morning everybody hit the track for the first of four rounds of BoLink Clash qualifying. Drivers raced in six separate classes. There were Amateur Stock and Modified classes in both  $\frac{1}{12}$ - and  $\frac{1}{10}$ -scales. The Invitational drivers also raced in  $\frac{1}{12}$ - and  $\frac{1}{10}$ -classes. These Invitational drivers were mostly factory-supported, and some local drivers were also in the Invitational class because of their prowess on this awesome oval.

As the qualifying progressed, the speeds increased. The bright spot in the first two qualifying rounds was the performance of Steve Swindle, driving a new BoLink Eliminator 10. Swindle led the  $\frac{1}{10}$ -scale Invitational class with a 44-lap effort in his first five-minute run, and came back in his second race with a 45-lap run.

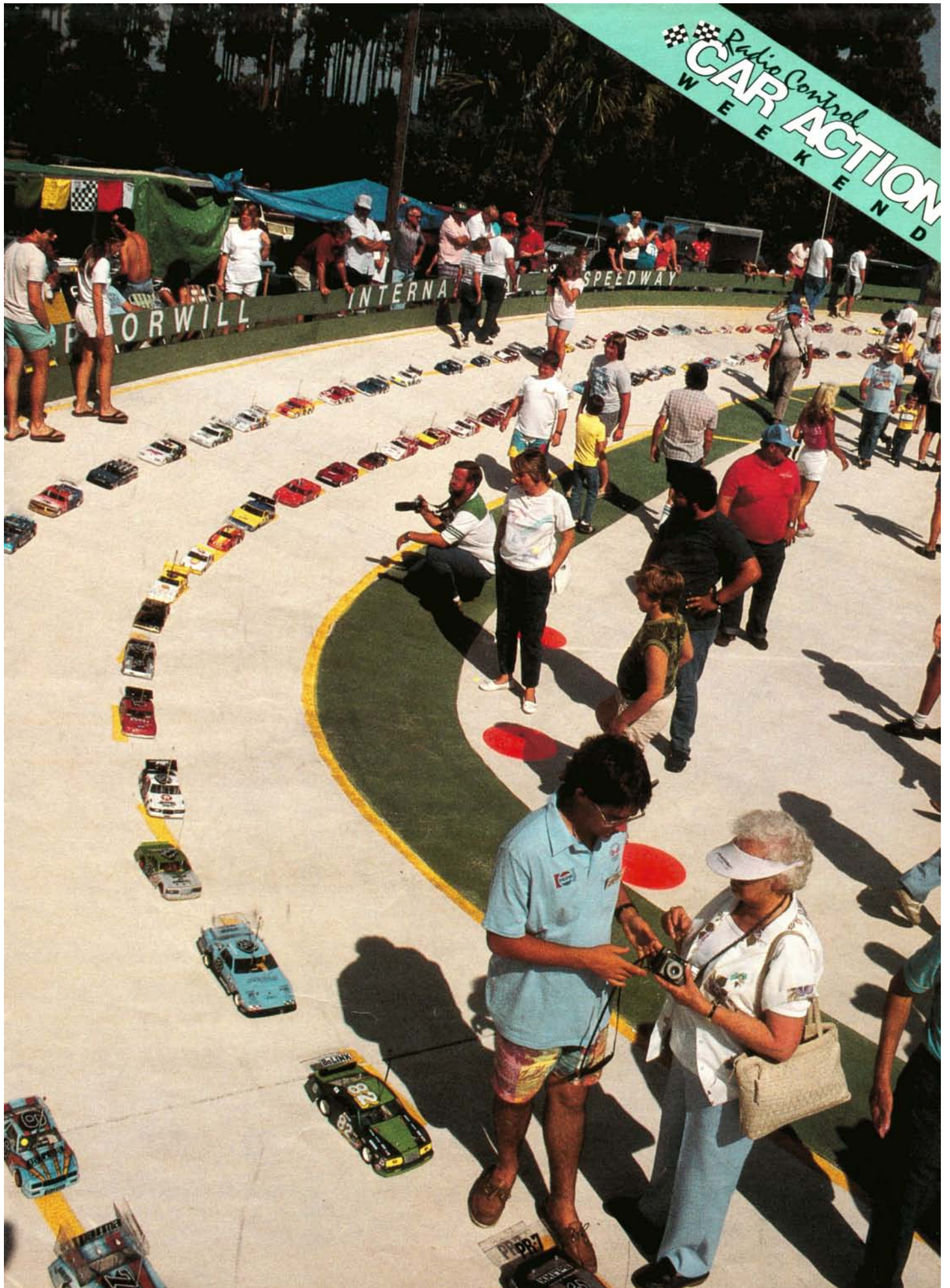
Late Saturday afternoon, the Invitational drivers ran the Reedy Top Gun Run, and in the evening there was a banquet for the racers and their families. On Saturday night many racers burned the midnight oil while looking for some way to gain one of the top three spots for a BoLink Clash trophy.

The racing started at 8:00 on Sunday morning, and there were still two more rounds of qualifying to get through. Many drivers took a shot at beating Swindle but they all came up short. Swindle won the  $\frac{1}{10}$ -scale Invitational BoLink Clash TQW trophy, driving a Twister-powered Eliminator 10 with a Tekin speed control. Kent Clausen won the  $\frac{1}{12}$ -scale Invitational TQ trophy, driving an Associated 12L with a Reedy Red Dot motor and Novak speed control. Clausen missed the 16-lap barrier by .5 of a second.

In the Amateur classes, Phil Simms was the TQ in  $\frac{1}{10}$ -scale Modified



Radio Control  
**CAR ACTION**  
WEEKEND







with a CAM-powered Predator using a Tekin speed control.

Clausen missed the 16-lap barrier by .5 of a second.

In the Amateur classes, Phil Simms was the TQ in  $\frac{1}{10}$ -scale Modified with a CAM-powered Predator using a Tekin speed control. Chris Powers took TQ honors in  $\frac{1}{10}$ -scale Stock, driving a PRC PR7 with a Team Losi motor and Novak speed control. Rick Pruitt dominated  $\frac{1}{12}$ -scale by taking TQ honors in both Stock and Modified, driving TRC Pro 12 cars, and using a CAM motor in his modified.

After the trophies had been awarded for the BoLink Clash, the racers lined up the 180 entries on the track for the parade of cars, and the Advance Engineering Mini-Mag Concours Contest took place. In the Scale Class, Steve Swindle won first place with a Ricky Rudd Motorcraft

Gary McAllister and team drivers display their McAllister/Revtech Special.



Above, Kent Clausen of Team Associated poses with trophy after winning the Pepsi Challenge. Right, the trophies on display for winners of the BoLink Clash.

T-Bird. Second place went to Ray Lambert Sr. with a Kyle Petty car, and third went to Jacqueline Rando with a Coors T-Bird. First place in Best Paint went to Bob Urban with a green metalflake job. Ari Myers was awarded second place for a beautiful Lay's Potato Chip car, and Ray Lambert Jr. took third with a super-bright Surf car.

The qualifying was over. It was time for the Third Annual Pepsi Challenge Stock Car championship, which was to be the last event of the Car Action Weekend.

The racing started with the  $\frac{1}{12}$ -scale Stock Class. Not surprisingly, Rick Pruitt duplicated his 43-lap qualifying

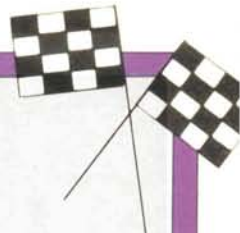
(Continued on page 70)





**A GRUELLING TEST OF ENDURING TEAM WORK.**

# NOVAK 600



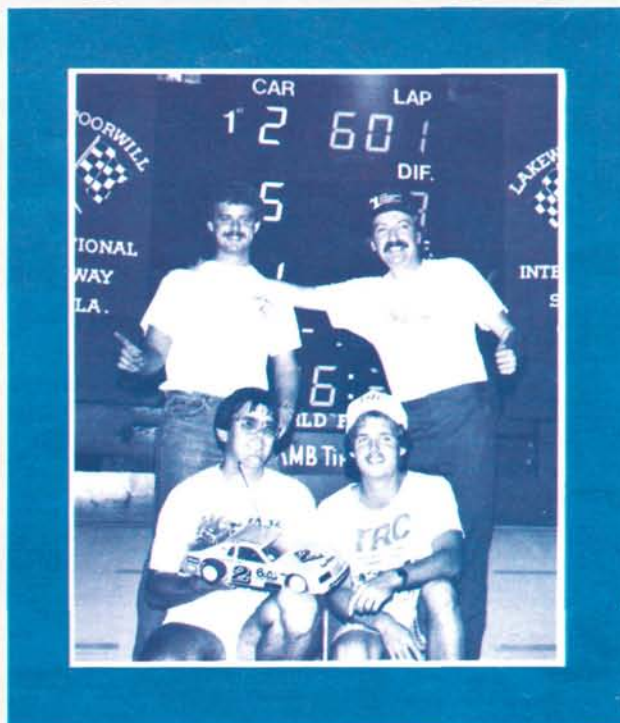
**T**HE RADIO-Control Car Action Weekend kicked off on Thursday night with the Car Caddy Twin 125 Qualifiers. Fourteen Invitational 1/10-scale teams were divided into seven car heats, each heat being 125 laps long. Because each car could only go 35 to 40 laps on a battery charge, they all needed at least two pit stops to make the distance. The first- and second-place cars from each heat would automatically advance to the Novak 600 on Friday night. The two first-place cars would make up the front row, while the second-place cars would be in the second row starting-spots for the 600. The next six fastest cars from either 125 would fill out the Novak field.

Bud Bartos and Dave Hechler teamed up to drive the winning car in the first 125, while George David and Kevin Perry finished second, five laps off the pace. Jeff Davis and Kim Davis were the drivers of the third-place car with 114 laps, and Bill Jeric drove solo to fourth place with 113 laps. The Bartos/Hechler team completed the 125 laps in 15.35.2 for a 35mph average speed.

The second Car Caddy 125 was won by the team of Joel Johnson and Jim Fuller, with second place going to Johnny Bright and Craig Kelley with 117 laps. In third place was Andy Dobson with 113 laps. Tom Crowe and Ernie Bucci finished fourth with 108 laps. By finishing the second 125 in just 15.25.0, the Johnson/Fuller team averaged 35.3mph and captured the pole for the Novak 600.

First up Friday was the Advance 100, sponsored by Advance Engineering. This race was for amateur 1/10-scale racers to have a shot at long distance racing. The race was extremely close, but after 100 laps, Bobby Reeves beat Dave Krzan by 3.2 seconds. Reeves averaged 33.4mph, driving an H.P.C. chassis with a Race Prep motor and Novak speed control. Krzan's CAM-powered Predator used a Tekin speed control. Larry Willison drove to third place with 97 laps. His PR7 had CAM power and Tekin speed control.

The Novak 600 was the next race to go. With Johnson and Bartos starting on the front row, this was expected to be a 600-lap sprint. Very quickly, the Bartos/Hechler team moved to the rear and was lapped frequently. Their car was very unstable. The Davis/Davis team took the lead and had things going their way. The two Composite Craft teams (Davis/Davis and Johnson/Fuller) built a quick-change battery system that had them making



by RICH HEMSTREET

second pit stops. At one point in the first 200 laps, Andy Dobson, with the new Parma car, was in second place and then, briefly, in first. Because Dobson and Bill Jeric (the other Parma driver) had both qualified for the 600, they didn't have anybody to work for them as a pit crew. The BoLink team supplied four crewmen for the Parma pits.

That's the kind of sportsmanship we have in R/C racing!

The Johnson/Fuller team ran into motor problems, and needed a motor change. By lap 300, the Bartos/Hechler team wasn't losing any more ground, even though their pit stops were taking 16 to 18 seconds, in comparison with the Davis/Davis 3-second stops.

Bartos/Hechler started gaining ground by lap 400.

They'd set up their car to run 40 laps per battery change. The Davis/Davis team was only running about 35 laps per battery pack.

Bartos/Hechler took the lead just before their last battery change, and at lap 560 they pulled in for batteries so giving the lead to the Davis team. With Bartos at the transmitter, this car moved up to the rear bumper of the Davis car, and when the Davis car pitted, Bartos was gone. In the last 30 laps, Barto put 2 laps between his green machine and the Davis/Davis car. Bartos completed the 600 laps in 1:16.37.7. The Bartos/Hechler TRC Pro 10, powered by a CAM motor, averaged 34.1mph. They used a Tekin speed controller.

The Davis/Davis Composite Craft Predator was powered by a Trinity motor, and they used a Tekin speed control. After a second motor change, the Johnson/Fuller team finished third with 549 laps. They also drove a Trinity-powered Predator with a Tekin speed control. The David/Perry team took fourth in a CAM-powered Predator with Novak speed control, finishing with 538 laps.

The fifth-place car was the last one to complete at least 500 laps. Bill Jeric drove the new Parma car to 532 laps, using Parma power and a Novak speed control.

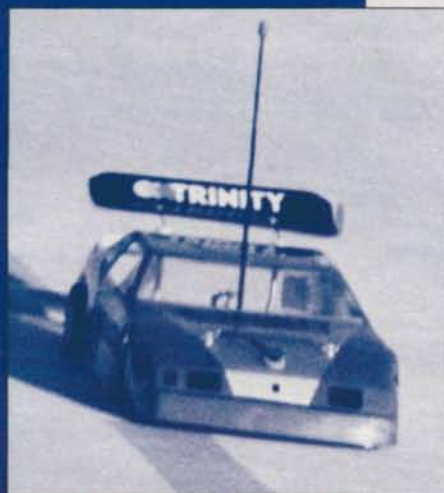
Loctite gave an award to the best pit crew in the 600. The crew which overcame the most problems was the Johnson/Fuller crew of Frankie Trinchitella and John Robinson. When they weren't changing motors, they were changing battery packs in less than 3 seconds. Their second motor change only took 2 minutes and 18 seconds, so they certainly *earned* the Loctite Pit Crew Award! ■



## WHO WAS FASTEST?

# REEDY RUN

by RICH HEMSTREET



**B**RAGGING RIGHTS WERE up for grabs on Saturday afternoon, as the Reedy Top Gun Run was going to determine which Invitational driver was the fastest. Each driver was given a 2-minute, solo run on the track. The idea was simple: turn more laps than anybody else in two minutes.

The rules were also simple. The cars had to be  $\frac{1}{10}$ - or  $\frac{1}{12}$ -scale stock cars, and that was the only rule. There was no weight limit and there weren't limits on motors or battery packs.

In  $\frac{1}{12}$ -scale, Jim Fuller won, driving a TRC Pro 12, with a Trinity motor and Tekin speed control. Fuller averaged 6.20 seconds per lap, or 42.2mph for the two minutes.

Kent Clausen came in second with his Reedy-powered 12L with Novak speed control. Clausen averaged 6.25 seconds for a 41.8mph speed.

Dave Hechler, driving a TRC Pro 12, with CAM power and Tekin speed control, tied Clausen at 6.25 seconds.

The  $\frac{1}{10}$ -scale Reedy Top Gun Run award went to Joel Johnson, driving a Trinity-powered Predator with Tekin speed control. Johnson averaged 6.19 seconds per lap for a 42.2mph average.

Bud Bartos was a close second, driving his TRC Pro 10, powered by a CAM motor with Novak speed control. Bartos averaged 6.21 seconds for a 42.1mph average speed.

Third place went to fifteen-year-old Steve Swindle, driving a BoLink Eliminator 10, with a Twister motor and Tekin speed control. Swindle averaged 41.4mph.

While the  $\frac{1}{10}$ -scale lap times improved from the March race, the  $\frac{1}{12}$ -scale cars slowed down. In March, Jeff Davis only averaged 39.2mph in  $\frac{1}{10}$ -scale, but Bud Bartos had averaged 43.5mph in  $\frac{1}{12}$ -scale. Apparently, the warmer afternoon track conditions slowed down the  $\frac{1}{12}$ -scale cars. The  $\frac{1}{10}$ -scale cars are probably going faster because of the increased competition in this scale.

After the official Reedy Runs, Jim Fuller and Bud Bartos had an unofficial, 2-minute match race with their  $\frac{1}{12}$ -scale cars. The first minute of the race, the two cars were never separated by more than 2 feet. During that time, Fuller ran three 5.7-second laps, and Bartos ran one. A 5.7-second lap is 45.9mph average speed. That's the fastest time ever on Lake Whippoorwill, but they didn't go into the record book because it wasn't an official event. During the second minute, Fuller pulled away from Bartos and won by a third of a lap. Bartos had geared wrong, since he had enough power left after two minutes, to take two or three more hot laps without the batteries dumping.

Team Trinity walked off with the Reedy Top Gun Trophies. ■

(Continued from page 68)

run and beat Chuck Sawyer by one lap. When the racing worked its way up to the  $\frac{1}{12}$ -scale Modified A-Main, Pruitt was there again. Not only did he win, but he won by a full lap again. This time Bobby Warner came in second with a 44-lap run.

In qualifying for the  $\frac{1}{12}$ -scale Invitational A-Main, Kent Clausen had beaten Dave Hechler by only one second. The Pepsi Challenge A-Main was even closer as Clausen ran 45 laps in 5 minutes and .5 of a second. Hechler was only two-tenths of a second behind at the finish.

The  $\frac{1}{10}$ -scale Stock A-Main was won by Jan Limpach, driving a Trinity-powered Predator with a CMW speed control. Limpach was



*The secret to Buddy Bartos' success at Lake Whippoorwill.*

driving the car Bud Bartos had driven when he became the "Legend of Lake Whippoorwill." Chris Powers came in second to Limpach.

John Robinson won the  $\frac{1}{10}$ -scale Modified A-Main, driving a Trinity-powered Predator, and was only three-tenths of a second away from lapping the field at the end. Michael Woodward took second place.

Finally, it all came down to a five-minute race for the  $\frac{1}{10}$ -scale Invitational Pepsi Challenge A-Main. Steve Swindle was on the pole with his BoLink Eliminator 10, and starting right beside him was the "Legend," Bud Bartos, driving a new TRC Pro Swindle jumped into the lead, and

(Continued on page 100)



# 

## CHAMPIONSHIP RESULTS

### CLASS: ONE-TENTH MODIFIED, AMATEUR

| Finish/Driver  | Chassis  | Motor   | Speed Control | Tires      | Body       |
|----------------|----------|---------|---------------|------------|------------|
| 1. J. Robinson | Predator | Trinity | Tekin         | BoLink     | McAllister |
| 2. M. Woodward | PR7      | Losi    | Victor        | BoLink     | BoLink     |
| 3. B. Horne    | Predator | CAM     | Tekin         | TRC/BoLink | McAllister |
| 4. P. Simms    | Predator | CAM     | Tekin         | BoLink     | BoLink     |

### CLASS: ONE-TENTH STOCK, AMATEUR

|               |          |         |        |        |        |
|---------------|----------|---------|--------|--------|--------|
| 1. J. Limpach | Predator | Trinity | CMW    | TRC    | BoLink |
| 2. C. Powers  | PR7      | Losi    | Novak  | BoLink | BoLink |
| 3. L. Frasco  | Predator | Trinity | Tekin  | N/A    | N/A    |
| 4. R. Jordan  | BoLink   | Losi    | BoLink | BoLink | BoLink |

### CLASS: ONE-TWELFTH MODIFIED, AMATEUR

|              |     |         |       |        |            |
|--------------|-----|---------|-------|--------|------------|
| 1. R. Pruitt | TRC | CAM     | Novak | BoLink | McAllister |
| 2. B. Warner | TRC | Trinity | Tekin | TRC    | McAllister |
| 3. J. Simms  | 12L | CAM     | Novak | BoLink | BoLink     |
| 4. P. Simms  | TRC | CAM     | Tekin | BoLink | McAllister |

### CLASS: ONE-TWELFTH STOCK, AMATEUR

|              |       |         |       |        |            |
|--------------|-------|---------|-------|--------|------------|
| 1. R. Pruitt | TRC   | N/A     | Novak | BoLink | McAllister |
| 2. C. Sawyer | Delta | Losi    | Tekin | TRC    | BoLink     |
| 3. J. Simms  | TRC   | Trinity | Novak | BoLink | McAllister |
| 4. E. Bowers | 12L   | Trinity | Tekin | BoLink | McAllister |

### CLASS: ONE-TENTH, INVITATIONAL

|               |             |         |       |        |            |
|---------------|-------------|---------|-------|--------|------------|
| 1. B. Bartos  | TRC         | CAM     | Novak | TRC    | BoLink     |
| 2. J. Davis   | Predator    | Trinity | Tekin | TRC    | McAllister |
| 3. A. Dobson  | Parma       | Parma   | CS    | BoLink | Parma      |
| 4. G. David   | Predator    | Twister | Novak | BoLink | McAllister |
| 5. S. Swindle | BoLink      | Twister | Tekin | BoLink | BoLink     |
| 6. K. Perry   | Predator    | CAM     | Tekin | TRC    | McAllister |
| 7. B. Jeric   | Parma       | Parma   | Novak | BoLink | Parma      |
| 8. J. Johnson | Predator    | Trinity | Tekin | TRC    | McAllister |
| 9. K. Davis   | Predator    | Trinity | CMW   | TRC    | McAllister |
| 10. M. Giem   | Dieterbuilt | Revtech | Novak | TRC    | McAllister |

### CLASS: ONE-TWELFTH, INVITATIONAL

|                   |        |         |       |        |            |
|-------------------|--------|---------|-------|--------|------------|
| 1. K. Clausen     | 12L    | Reedy   | Novak | Assoc. | McAllister |
| 2. D. Hechler     | TRC    | CAM     | Tekin | TRC    | BoLink     |
| 3. C. Kelley      | TRC    | CAM     | Tekin | TRC    | BoLink     |
| 4. K. Perry       | TRC    | CAM     | Novak | TRC    | McAllister |
| 5. M. Giem        | TRC    | Revtech | Tekin | TRC    | McAllister |
| 6. J. Fuller      | TRC    | Trinity | Tekin | TRC    | MRP        |
| 7. J. Rotruck     | BoLink | Revtech | Novak | BoLink | BoLink     |
| 8. L. Stevens     | Delta  | Revtech | Tekin | Losi   | McAllister |
| 9. T. Raskin      | Delta  | Revtech | Novak | TRC    | BoLink     |
| 10. G. McAllister | Delta  | Revtech | Novak | BoLink | McAllister |



# PROJECT OPTIMA

LOSE EVERY LAST OUNCE

**I**N PART I of Project Optima, with an Option House\* conversion and a little imagination, we created a great heavy, metal contender, but the question was: "Where do we go from here?"

My first thought was weight reduction, but I wanted to do it using something other than graphite or fiberglass. Then I remembered Project Frog, "The Red Prince," and a chassis made from TriDirComp. TriDirComp, or Three-Directional Composite, is a thin, light chassis plate which transformed the Tamiya Frog into a new animal, so why not turn the Optima into a new beast?

Hot Trick Racing Cars\* offers this TriDirComp chassis in two versions designed for the Optima. The first is the heavy-duty kit and the second is the ultra-light version. The ultra-light version was perfect since my final goal was to shed weight. The ultra-light chassis



by FRED MURPHY

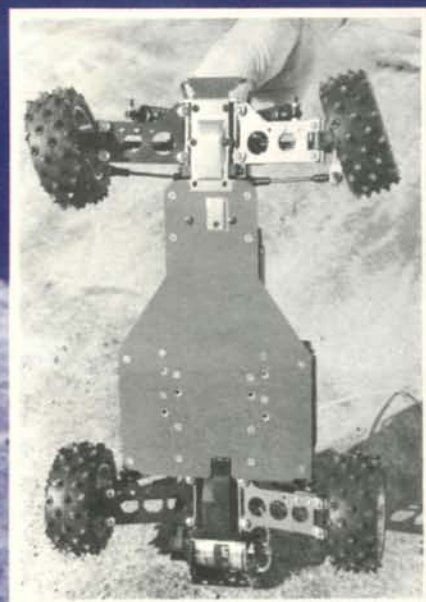
kit supplies a .093-inch-thick chassis pan and the super-duty a .125 of an inch pan. The Hot Trick Optima Ram chassis provides a fully enclosed bottom to improve aerodynamics. As well

as this, body mounting is improved with a universal velcro system which in turn keeps the inside of the Optima much cleaner.

The .093-inch chassis for the Optima is very thin and light, allowing a

rather large amount of chassis flex.

This was a concern, but Hot Tricks has thought ahead and provides an optional upper chassis plate. This upper plate will not only



The Hot Trick chassis plate provides good protection for all of the project car's electronic components.



Project Optima utilizes the miniature Nova 18-1 electronic speed control with Sermo's R/C connectors.



## R.O.A.R. WILL ALLOW!



Photos by STEVE POND.

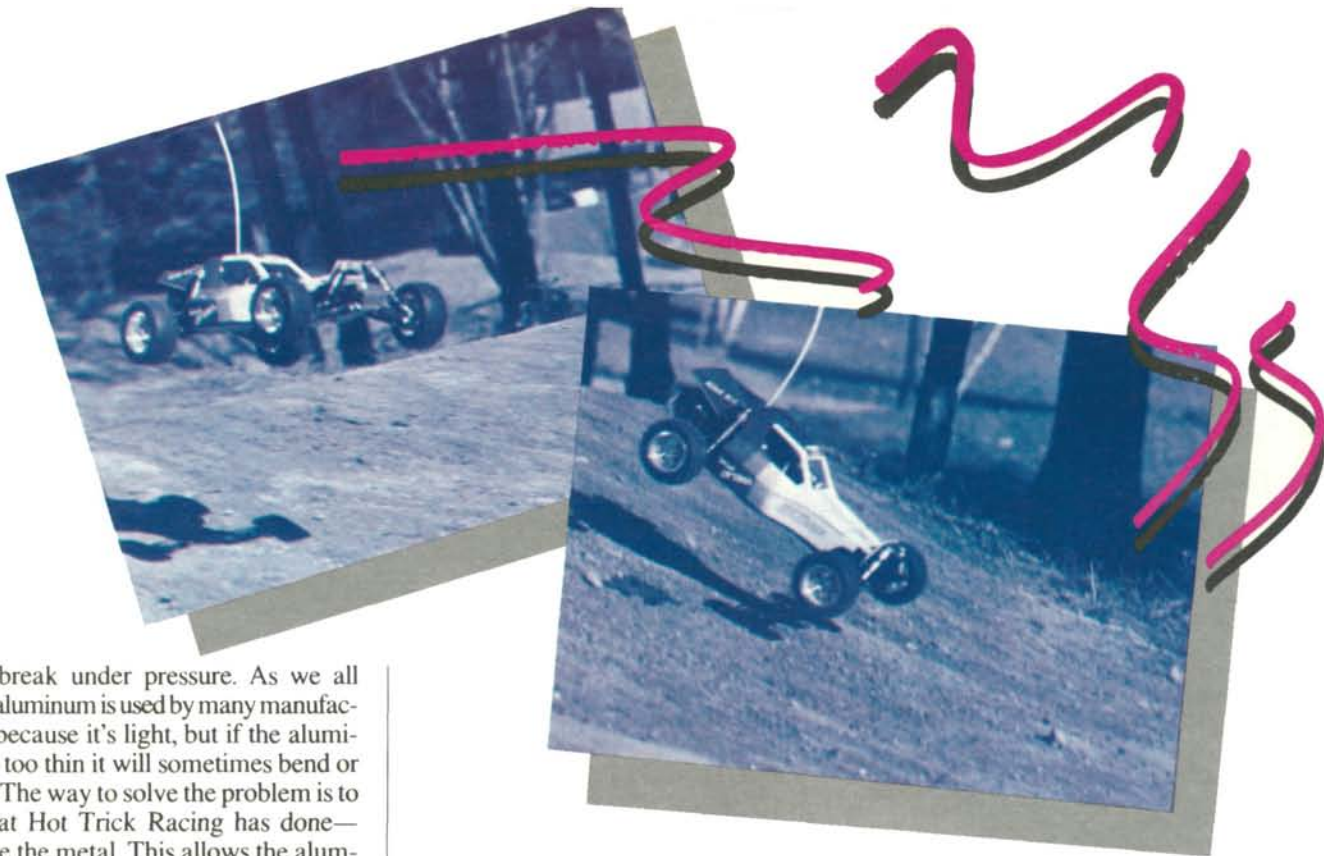
*Stock Optima steering and Option House shocks easily mount to the Hot Trick Project Optima.*



increase the rigidity of the main chassis, but will also give twice the surface area for mounting components. I highly recommend that you use this option because the flexing of a .093-inch chassis is just too much to handle under racing conditions.

The chassis kit also provides durable front and rear differential mounting brackets which





won't break under pressure. As we all know, aluminum is used by many manufacturers because it's light, but if the aluminum is too thin it will sometimes bend or break. The way to solve the problem is to do what Hot Trick Racing has done—anodize the metal. This allows the aluminum to be manufactured as thinly as possible to save weight, and the anodizing restores the strength that is lost by making the metal thin. By the way, it will probably make the aluminum stronger than if it was twice the thickness!

The Optima differentials and chain drive, along with the chain guards, easily transfer right onto the Optima Ram chassis. This is a good time to clean and inspect these components. After the cleaning and inspection, all bearing, gears and

half-shafts should be lubricated using Liquid Bearings from Paragon Racing Products\*. This is billed by the manufacturer as "the ultimate lubricant... absolutely will not attract dust." After the track test I was amazed to see just that—no dust! It did the job as billed, and, using a handy needle applicator, application was easy after the car was assembled.

Before installing the a-arms onto the Project car, the steering assembly from the Optima should be transferred in its entirety to the same position as in the stock version. The only holes you'll have to drill are for the steering servo mounting plate from the stock Optima if you decide to use it.

For the front and rear lower a-arms I elected to use the Hot Trick Optima Ram arms because they seemed to be as light if not lighter than the stock nylon arms. They're certainly going to be stronger because they're anodized, as are the other Hot Trick aluminum components. I'm sure that many faithful Optima owners have broken an a-arm or two, and I believe that anodizing might be the solution to this race-stopping problem which we've all experienced.

To add the final touches to the Optima Ram chassis, I also used the Hot Trick front and rear shock and wing mounting kit giving the most flexible mounting of shocks. When using the Hot Trick shock mounting system you can choose the stock or Option House shocks. You can

(Continued on page 108)

## PROJECT OPTIMA PART II

Type ..... 1/10-scale 4WD electric off-road

### Dimensions:

Track ..... Front: 97/16-inches, Rear: 97/16-inches

Wheelbase ..... 10 1/4-inches

Overall length ..... 12 5/8-inches

Width ..... 97/16-inches

Height ..... 5 inches

Weight with battery ..... 3 lbs. 10 oz.

Body material ..... Lexan

Frame type ..... TriDirComp Plate

Drive train ..... Chain

Front suspension ..... A-Arm with Coil-over Shocks

Rear suspension ..... A-Arm with Coil-over Shocks

Tires ..... Front: Option House, Rear: Option House (low profile)

Shocks ..... Front: Option House, Rear: RC10

Motor ..... LeMans 240SB

Speed controller ..... Nova 18-I

Bearings ..... Kyosho

Battery type required ..... 6-cell Racing Pack

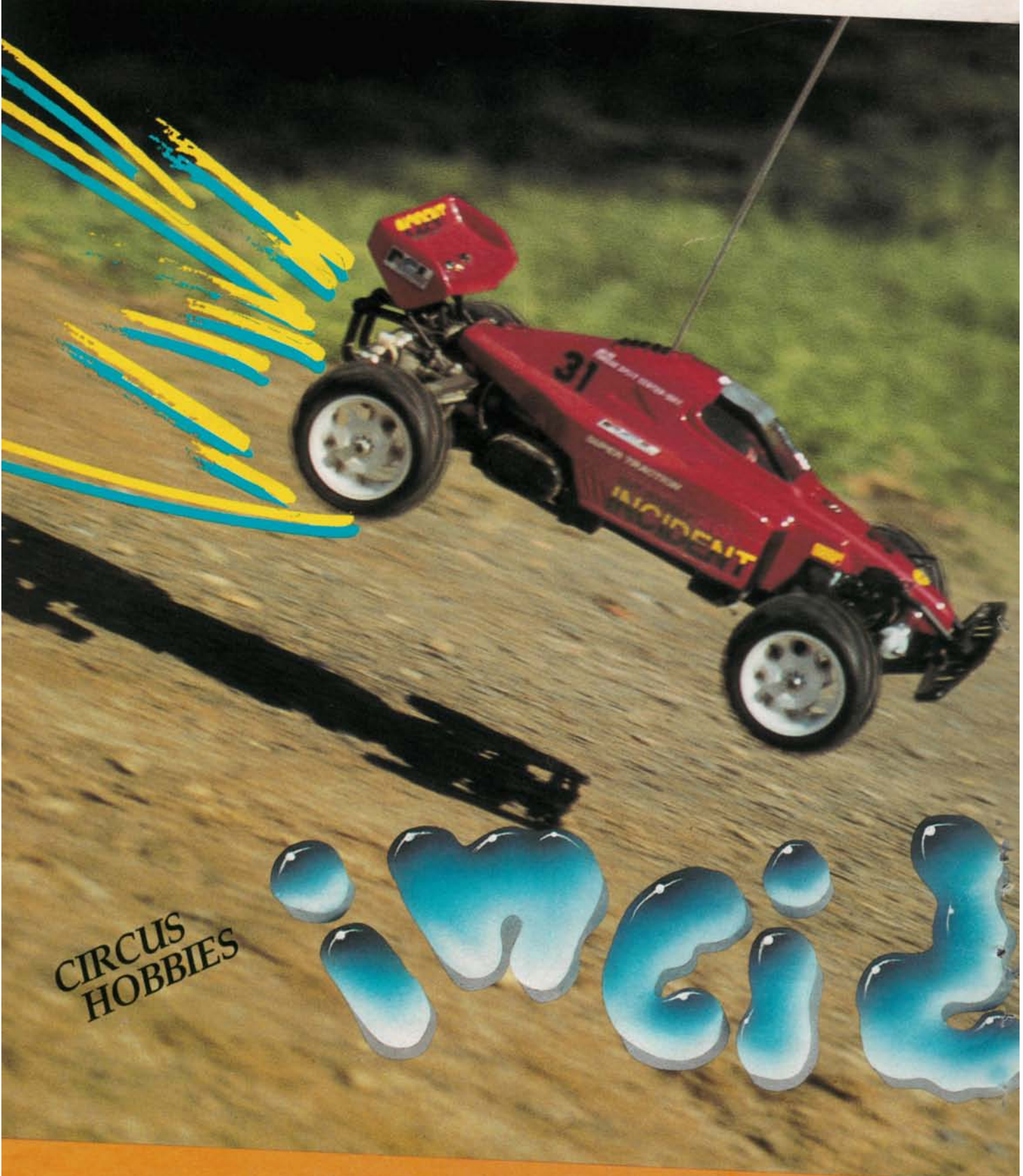
Options used: Tecnacraft aluminum wheels with titanium knock-offs;  
Kyosho Pulsar 2000 radio, Sermos R/C connectors (motor).







## Track Report



CIRCUS  
HOBBIES

wind





*An innovative three ball  
differential shaft-drive  
1/10 off-roader.*

*by PETER SNEDDON*

SOMETIMES I WONDER how I'd feel driving a true racing machine. I'm talking state-of-the-art racing, with the feeling of almost unlimited horsepower being transferred to a 4WD system, handling turns as well as straightaways. I can almost feel the silky-smooth gearshift in my hand, while I'm pinned to the seat with my pulse as well as the RPM's near the red line.

As a mere mortal of limited means however, my state-of-the-art racing cars take on a slightly different form. My most recent pulse-raiser is the new Incident 4WD from Circus Hobbies\*.

This 1/10-scale racing machine utilizes many of the same concepts as the biggies. It has a full-time, adjustable, shaft driven three-differential power distribution system to tackle the turns, a double-wishbone independent suspension with camber adjustments front and rear, and the option of 4-wheel steering.

Can you tell I was anxious to get this one on the track?

**THE KIT:** The Incident comes with most of the necessary hardware, but you'll have to add the radio, battery, charger, and your favorite competition motor. It features a strong monocoupe chassis that holds the BEC resistor-type speed control, the motor and the radio, in a fully enclosed, dirt-resistant mechanical box which protects the equipment from the elements.

The kit supplies the necessary Allen wrenches, servo tape, shock, oil and tie straps. You'll also

*(Continued on page 117)*



## PANDA

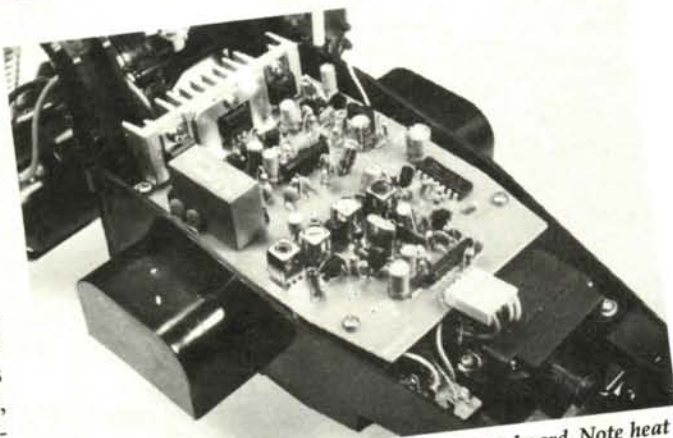
by STEVE POND

## An out of the box 1/10-scale off-roader with MOSFET electronics.

**T**HE NEW PANDA from Hobby Shack\*, is an innovative 1/10-scale off-road racer that redefines the phrase "ready-to-run." Although many other kits claim to be ready-to-run, they still involve a minor amount of assembly as well—that's if you consider applying the decals, assembly. If getting on the track or bashing around the back yard as soon as possible is your goal, the Panda is right up your alley. It's also one of the strongest entry-level cars we've tested to date.

Although the Panda is an entry-level kit, some of its features are similar to those of higher-performance kits. The chassis is a bathtub-type formed of tough A.B.S. resin, and featuring lower A-arms with upper link independent front suspension, floating live rear axle, friction-dampened coil-over shocks on all four corners, a bevel gear differential, an RS-540S motor and a two-channel radio system.

The radio system is a two-channel stick radio with speed and steering trim adjustments, battery level meter and a removable antenna. It's available on one of six 27MHz channels ranging from 26.995 to 27.225. However, the radio system is not what makes the Panda unique. The electronics on board the Panda are what caught my eye. The Panda has a steering servo complete with a servo-saver already installed. The servo is connected to a



Panda's electronics sit on a single, protected pc board. Note heat sink at rear for MOSFET cooling.

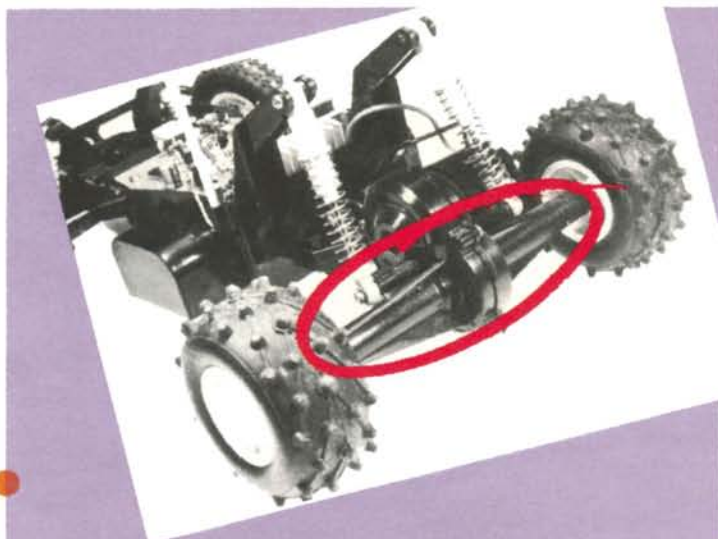


printed circuit (pc) board containing all the electronics for the car. The pc board contains both the receiver for the radio system and the electronic speed control. The elec-

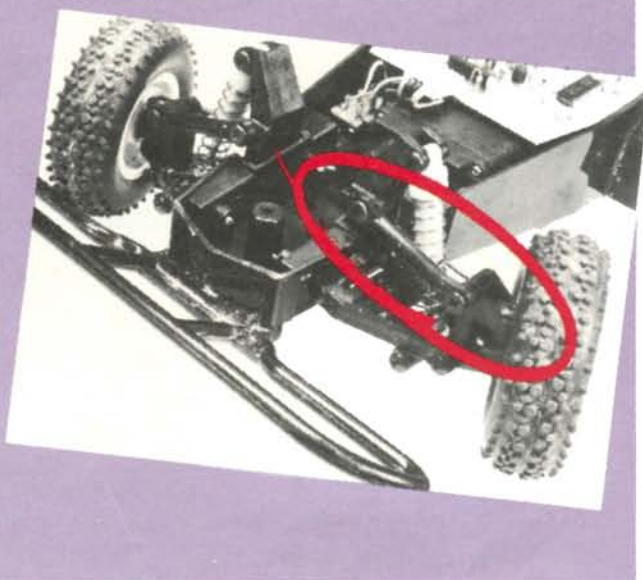
tronic speed control uses high-tech MOSFET design and includes a large aluminum heat sink to dissipate the heat when the going gets tough. This speed-controller is connected to a standard RS-540 motor that is protected by a plastic housing from collision damage. The housing has about a 1/4-inch gap all the way around to keep the motor from getting too hot. The package is rounded out with a set of aerodish-type







*Above, Panda's rear floating axle joins the chassis via an oversized low-friction ball joint. Differential is sealed. Right, the upper link on the front suspension in conjunction with the lower A-arm retains front suspension geometric integrity even under full compression.*



wheels that are of standard size allowing you to change to virtually any type of tire. The tires which are included are the popular knobby front and spiked rear found on many high-performance cars.

The Panda needs a 6-cell battery in the flat pack configuration with a Tamiya-type connector. The battery compartment only has room for the battery, so it would be best to find a battery which has long wires for the connector. This will allow the connectors to be tucked into the chassis *after* they are plugged together, otherwise you'll have a problem getting the door shut. After charging the battery, I threw a set of fresh alkaline batteries into the transmitter and

drove the Panda for a few test laps around the living room. This is not recommended as it may cause severe anxiety to your parents or spouse. Go outside! This little test assured me that all systems were "go," and then it was off to the beach. The instruction manual warns against running the Panda in the sand because it may cause overheating from excessive loads on the motor and speed control, but the section of beach I was to run on was where cars frequently drove, and the sand was packed to the hardness of most dirt tracks. After topping-off the battery, I began my assault on the stretch of sand. Instead of pushing the stick to full throttle as I usually do, I brought it on very slowly to see how proportional the electronic speed control is. Coming off neutral, you can hear the current flowing to the motor, but it isn't enough to put the Panda in motion. The power doesn't come on until

*(Continued on page 124)*



## 1/8-SCALE

# WORLD '87 CHAMPS

by RICH HEMSTREET

Contenders from around the world came to do battle in the 1/8-scale war of attrition.



The O'Donnell-Rossi powered RC-500 of '87 World Champ RePete Fusco.



Clockwise from left, RePete Fusco beat the World in '87. These cars reach speeds of greater than 60mph.



**D**RIVERS from 21 countries gathered at the Ranch Pit Shop\* in Pomona, California, to determine who would be the 1987 1/8-scale on-road world champion. One hundred and nineteen drivers, including the reigning world champion, Rody Roem of Holland, and former world champion, Art Carbonell of Miami, Florida, were on hand and prepared for five days of racing. The International Federation of Model Automobile Racers (IFMAR) sanctioned the event.

The week began with free practice time so that drivers could get their cars dialed in. On Tuesday morning everyone



These 10 drivers made it to the World Champion finals.

had to have their cars inspected. The cars were closely eyeballed, with special attention to fuel-tank capacity. Radios were also checked to make sure they wouldn't cause interference problems. Following



the technical inspections, practice commenced.

On Wednesday morning qualifying began. All drivers were scheduled to run six 10-minute qualifying heats over the next three days. Running 10-minute heats insured that each car would be making at least one pit stop for fuel in each heat. This gave everyone a chance to get their refueling techniques worked out. While many teams used high-tech fuel guns, Gene Husting of Associated used a simple Delta fuel bottle and had some of the quickest pit stops of the week.

After the first day of qualifying, Ralph Burch Jr. of Denton, Texas, and Rody Roem were tied for top qualifier. Both Burch and Roem had turned 35 laps in 10.16.4. On Thursday Burch moved into the top spot by himself with a 35-lap run in 10.12.4. On Friday Gil Losi Jr. of Ontario, California, ended up as top qualifier with an excellent run of 35 laps in 10.12.0.

The top four qualifiers all moved directly into the championship final. The other 115 drivers still had a chance to move into the world championship final event. The top three drivers in each lower final were bumped up to the next higher final. These lower finals led up to two 30-minute semi-finals. The first and second place drivers from each semi transferred into the world championship final along with other semi-finalists.

Losi, Burch, Roem, and Tony Neisinger of Costa Mesa, California, were the only drivers to turn 35 laps and move directly to the world championship final. Roem was the first reigning world champ to earn a spot in the final to defend

his title. All day long on Saturday the lower finals were run. These included the slowest 87 qualifiers competing in twelve 20-minute mains. Six of these drivers were bumped up to the quarter-final rounds on Sunday.

Almost all 119 cars were four-wheel drive with two-speed transmissions. There were eight different manufacturers' cars represented. Associated and Serpent had the most cars present. Delta, Cook, Mantua, Kyosho, P.B., and S.G. filled out the rest of the field.

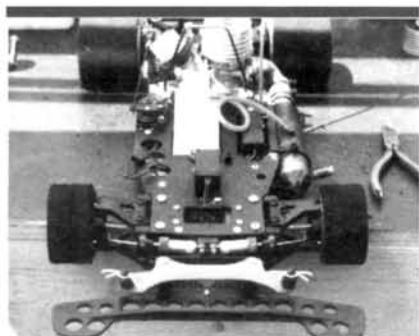
The last six drivers to earn positions in the world championship final were Barry Grossenbacher of Phoenix, Arizona; Butch Kloeber of LaVeen, Arizona; Re-Pete Fusco of Brooklyn, New York; Curtis Husting of Fountain Valley, California; Ron Rossetti of Rancho Cucamonga, California; and Kevin Mercadanti of San Bernadino, California.

Mercadanti was the only driver to transfer all the way from the lower finals to the championship race. He had qualified 40th overall after 6 rounds.

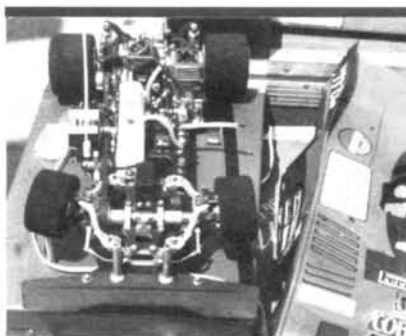
The cars in the final were six Associated RC-500s and four Serpents. All of these cars were four-wheel drive with two-speed transmissions. Eight out of the ten cars were powered by Paris motors, including the Losi T.Q. Serpent. A McCoy-Rossi motor and an O'Donnell-



From top, Neisinger, left, was third; Fusco, center, was '87 champ; Mercadanti was second. Ralph Burch, Jr. prepared new body during semi-finals. Steve O'Donnell handled refueling for Fusco. Start of one of the many heat races.



Rody Rowen's Serpent was third-fastest qualifier.



The Cook Cobras were the most unique-looking cars.

Rossi completed the field in the final. Many of the Associated RC-500s used a new, solid axle rear end; no rear differential was needed on the Ranch Pit Shop track.

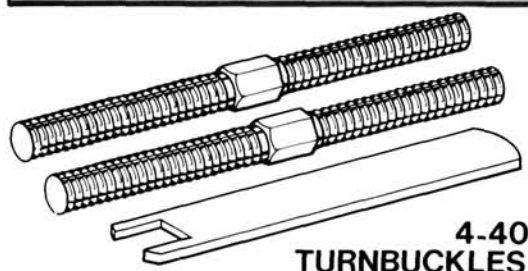
The 60-minute, 1987 world championship final looked as if it were going to be a battle of attrition. Almost from the start, Neisinger was in trouble; his car wouldn't shift into high gear. He spent the entire race pulling over to let others pass him. Losi and Burch both ran into problems.

(Continued on page 100)



# DU-BRO... PERFORMANCE MINDED

## R/C CAR ACCESSORIES & HARDWARE

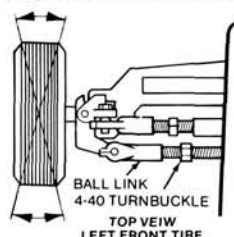


**4-40  
TURNBUCKLES**

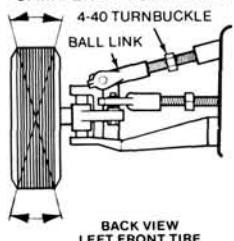
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**TOE-IN, TOE-OUT ADJUSTMENT**



**CAMBER ADJUSTMENT**



**DU-BRO PRODUCTS** 480 Bonner Road Wauconda, Illinois 60084

## NASCAR

(Continued from page 62)

pit crew can often determine whether their driver wins or merely finishes.

Major corporations are involved in sponsoring NASCAR race teams. While the amount of money paid is seldom revealed, it's estimated that a top team will receive \$1.5 million a year from its major sponsor. These teams will frequently carry the banner for one or two smaller associate sponsors as well. The cars are decked out in their sponsors' colors, and it is certainly a colorful sight when 40 of these machines line up to start the Daytona 500.

Winston Cup racing is extremely competitive. On any given week, there are probably 20 teams with a good chance of winning. Often as many as 10 to 15 cars are on the lead lap at the end of a 400- or 500-mile race. Frequently, the driver in the lead on the last lap isn't the first across the finish line.

NASCAR Winston Cup racing is the top series, with the biggest names in racing. NASCAR puts on a professional race making sure the fans see a very competitive race each time, and radio-control racing could learn a lot from NASCAR. ■

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- Highly detailed injection-molded 1/10 scale bodywork with retractable working headlamps
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- 6 oil filled shock absorbers
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Complete kit including high performance drive set, full light set, remote control radio and Owner's manual .....\$699.  
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|---------------------|-------|-------------------------|-------|
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| Fox.....            | 135   | Falcon.....             | 103   |
| Frog.....           | 120   | Royal Ripper.....       | 80    |
| Lunch Box.....      | 85    | Traxxas Wildcat.....    | 80    |
| Black Foot.....     | 95    | Traxxas Assmb. CAT..... | 130   |
| Monster Beetle..... | 140   | RC/10 W.B.B. ....       | 175   |
| Boomarang.....      | 136   | PRO 110 W.B.B. ....     | 110   |

### CHARGERS

|                  |       |                            |       |
|------------------|-------|----------------------------|-------|
| Protech 701..... | \$ 60 | 7.2 volt flat or hump..... | \$ 20 |
| Protech 702..... | 50    | 8.4 volt flat or hump..... | 25    |
| Protech 703..... | 28    | Duracell 4-pack "AA".....  | 3.50  |
| Leisure 105..... | 28    | Duracell 24-pack "AA"..... | 15.00 |
| Leisure 107..... | 39    | Duracell 96-pack "AA"..... | 53.76 |

### RADIOS

|             |       |                             |      |
|-------------|-------|-----------------------------|------|
| Futaba..... | \$ 50 | PACTRA R/C PAINT/All Colors |      |
| ACOMS.....  | 55    | Spray.....                  | 2.50 |
|             |       | Bottles.....                | 1.50 |

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### HARDCORE HOBBIES

175 - 5th Avenue Suite 2352  
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## HOT CARS

(Continued from page 49)

thrash on his car all day to get it to handle; just stick it on the track and go.

With three more manufacturers getting into 1/10-scale on-road racing, this has become the most competitive style of racing, and most of the manufacturers should have their cars in production by now. While these cars were designed for running on smooth superspeedways, all the ones I know work on road-courses, carpet and parking lots also. So what are you waiting for—get racing!!!!

*\*The following are the addresses of the manufacturers mentioned in this article:*

BoLink R/C Cars Inc., 420 Hosea Road, Lawrenceville, GA 30245.

TRC, P.O. Box 478, Oakboro, NC 28129.

Composite Craft, 2400 Sand Lake Road, Orlando, FL 32809.

Parma International Inc., 13927 Progress Parkway, North Royalton, OH 44133.

Precision Race Cars, P.O. Box 2455, Titusville, FL 32781. ■

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## WEEKEND

(Continued from page 71)

Bartos, after falling behind early, passed Andy Dobson in the new Parma car, for second place. Then Swindle dropped off the pace with battery problems. For a while, Jeff Davis put pressure on Bartos, until the Legend pulled away for the victory with a 45-lap run. Bartos' CAM-powered car averaged 38.6mph for the five-minute run.

After the racing, the Pepsi Challenge trophies were awarded to the top three finishers in each main. Trinity awarded the Top Amateur Driver Award to the Amateur A-Main winners. These three drivers will be eligible to move up to the Invitational Class at the next race.

Radio Control Car Action Weekend was a huge success. Drivers from all over the country are now hooked on super-speedway racing, thanks to Lake Whip-poorwill International Speedway.

When sharp mobile crews from WESH CH2 (an NBC affiliate), WCPX CH6 (a CBS affiliate), WFTV CH9 (an ABC affiliate), and FNN (Florida News Network, an ESPN affiliate), come to an event and continue to cover it for the entire weekend, something's up. That's exactly what happened at Car Action Weekend. Something is most assuredly up; but it's just the tip of the iceberg! ■

## WORLD CHAMPS

(Continued from page 85)

Roem was knocked off the pace when he was put into a wall by a slower car. Kloeber was out of the race by the 20-minute mark. Meanwhile, Fusco was running a strong, clean race. Once he had the lead, he wasn't going to let it go. Fusco started lapping the field with relative ease. At the end, the new world champion had a 7-lap lead over second place Mercadanti. In third was Neisinger, who (while pulling over to let others pass) had avoided other problems and stayed out of the pits. Losi finished fourth due to several extended pit stops. Fifth place through tenth were Hustling, Roem, Burch, Grossenbacher, Rossetti, and Kloeber.

Fusco drove an Associated RC-500 with an O'Donnell-Rossi motor to victory. Radio Control Car Action congratulates Re-Pete Fusco on becoming the 1987 1/8-Scale On-Road World Champion!

*\*The following is the address of the company mentioned in this article:*

*Ranch Pit Shop, RPS Distributing, 1655 E. Mission Blvd., Pomona, CA 91766.* ■

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## WRANGLER

(Continued from page 53)

attracting the big names in both drivers and sponsors, and I think that radio control superspeedway racing will generate as much interest when more facilities are available. I've already heard talk of a superspeedway series for the R/C cars being worked on in the southeast, with many big-name sponsors showing an interest. So let's give the "big boys" a run for their money, because in the very near future the glamour sport of racing just might be radio controlled.

By the way, if you'd like to see the Dale Earnhart Wrangler/Loctite 1/10-scale superspeedway car, it will be on tour nationally this winter with Loctite, making stops across the country at the major radio control trade shows.

*\*The following are the addresses of the manufacturers mentioned in this article:*

Bolink R/C Cars Inc., 420 Hosea Rd., Lawrenceville, GA 30245.

MRP, 18676-142 Ave., N.E., Woodbinville, WA 98072.

Futaba Corp. of America, 555 W. Victoria St., Compton, CA 90220.

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## OPTIMA

(Continued from page 74)

also use long shocks in the front if you're looking for extra shock travel, or you can use any combination of shocks which you can think of. The Project car uses the Option House front shocks in the rear. However, after the track test I've decided to install the Option House rear shocks because the setup didn't provide enough flexibility in the rear suspension. The shorter rear shocks made the rear suspension much too stiff to be effective.

The radio system used in the Project

car was the Kyosho\* Pulsar 2000, with the speed control coming from Nova R/C Products\* of California. The Nova R/C 18-I electronic speed control is the smallest control I've ever seen. It measures 33mm x 24mm x 10mm and weighs only 18.5 grams. To give you an idea of how small this unit is, just take two halves of a Tamiya battery connector, lay them side by side, and that's really close. The voltage capacity of the Nova is 6V to 9.6V with an instantaneous maximum current of 600amps and a continuous maximum current of 250amps. But how would it perform? In the track test the Optima exhibited a massive amount of glitching and further testing revealed that this wasn't caused by the radio system. I concluded that the speed control was at fault.

Guess what? I made the number one fatal mistake of not presetting the speed control once it was installed. Silly me! Once back in running condition the Project car, equipped with a properly adjusted Nova 18-I speed control, was flying easily around the track without the stiffness which I experienced when using a rear shock that was too short, as earlier explained.

The only other apparent problem was that Project Optima was a little nose heavy when jumping. This can easily be solved by moving the battery back on the chassis about half an inch. The Hot Trick Optima has the holes already drilled for you, so in a matter of minutes the nose-heavy condition is gone.

I highly recommend Project Optima. It's complete with 6-cell racing pack and Tecnacraft\* aluminum wheels, as well as a set of Tecnacraft Titanium knockoffs (which you should threadlock in place—for reasons that I'm sure I need not mention). In race-ready condition it weighs 3 pounds 10 ounces—not bad for a car that was almost 8 ounces heavier when I started the diet!

Until next time, lighten up and make them eat dirt!

\*The following are the addresses of the manufacturers mentioned in this article:

Kyosho and Option House: Great Planes Model Distribution, P.O. Box 4021, 1608 Interstate Drive, Champaign, IL 61820.

Hot Trick Racing Cars, Inc., 1157 Cushman Ave., San Diego, CA 92110.

Paragon Racing Products, 8802 Knollwood Dr., Eden Prairie, MN 55344.

Nova R/C Products, 851 N. Hacienda Blvd., La Puente, CA 91744.

Tecnacraft, 1335B Dayton St., Salinas, CA 93901. ■



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## LUNCH BOX

(Continued from page 22)

installation of the rear end. This unit, as well as all other high-friction points on the Lunch Box, uses the plastic bearings which are standard equipment in all but a few Tamiya kits. These bearings are adequate for this application, but I've found that over a period they wear to the point at which the tolerances inside the differential open up to such an extent that damage to the rear end may result. Fortunately, I had a war-torn Hornet sitting around with a set of optional MRC/Tamiya ball bearings that are interchangeable with the Lunch Box's owing to similarities in the drivetrain.

Before attaching the rear end to the chassis box, the motor should be attached. Although the kit includes a 540-type motor, I decided to pick up a motor that would add a little spice to the menu. The motor I chose for the Lunch Box is the Race Prep Dyno Stock, as this gives a significant increase in performance while still allowing for a respectable run time. This, however, is all the motor I would recommend for the Lunch Box. With a modified motor the Lunch Box would spend more time on its roof than on its tires.

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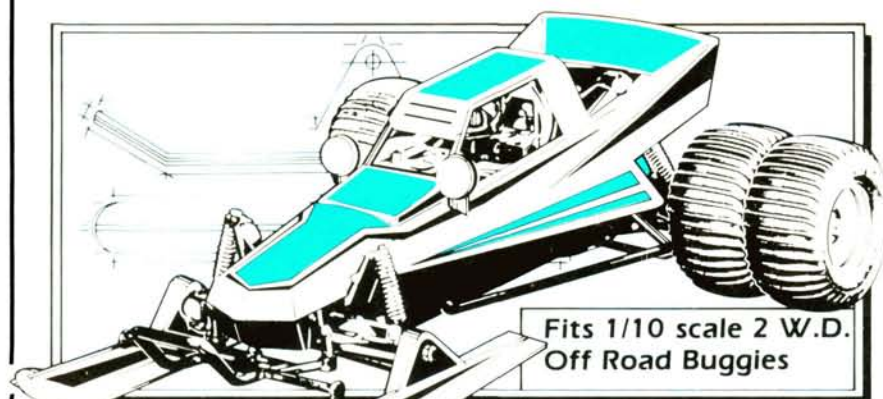
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## LUNCH BOX

Once the rear end is attached to the chassis, install the shocks. I chose a set of oil-dampened shocks for the Lunch Box in place of the friction-type shocks included in the kit. This was because I had a set of shocks handy from a previous Monster Beetle review, and I prefer these to the original equipment. Had these shocks not been readily available, I would have had no reservations about using the standard shocks. These will produce more than adequate dampening provided they are well kept. The rest of the construction is straightforward, as with all Tamiya kits.

The body in my kit came molded in white plastic, so I chose to give it a nice laquer job. I painted the body with an automotive touch-up spray. These are available in just about any color, so the choice is yours. Before applying the paint, apply a coat of primer. Once the body is primed, apply about seven coats of color, letting the paint dry between coats. The paint must then be hand-rubbed with compound to get a high-gloss finish. If this sounds like too much work, don't decide against it half-way through the

(Continued on page 116)

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# LUNCH BOX

(Continued from page 114)

job. Once you start painting, you must finish. When my paint job was complete, I applied the finishing touches and the Lunch Box was ready to take on all challengers.

**PERFORMANCE:** A quick bench test assured me that the Lunch Box wasn't going to try to take on a tree before I got a chance to take a picture of it. After

placing it on the street for its maiden run, I gave the throttle trigger a strong squeeze. To my surprise, the Lunch Box kicked back on its heels and dragged its tail (wheelie bar) for about 10 feet with the front wheels flying high. This came as something of a surprise, because I'd assumed that the wheelie bar was only there to prevent flipping off a rogue jump. After a few passes down the street I realized that without the wheelie bar, the Lunch Box would be on its shell like a

helpless tortoise. The next step was to give it some hard lefts and rights to see how it would handle with such a light front end. When the front wheels came down to earth and I was still on the throttle, the Lunch Box was able to make a turn, but not without some serious understeer. I placed an old receiver battery pack in the front end of the chassis and this seemed to help keep the front wheels on the ground, as well as improve the handling, but I was having too much fun riding wheelies up and down the street to leave it in there. After running the batteries down, I put the Lunch Box to rest for the photo shoot.

After recruiting the madman Fred Murphy to pilot the Lunch Box, we headed for a desolate swimming hole with a sandy border where we could get some shots of the Box in action. As soon as Fred could get the tires on the sand, he buried the throttle with reckless abandon. Once again, the Lunch Box "dug in its heels" and powered into a wheelie. When the front end settled back to earth, Fred flipped the trigger to the brake side and the Box whipped its tail around. Before it had a chance to get all four wheels on the ground, Fred leaned into the throttle again. The Box hesitated as it looked for some solid ground to get hold of, then began to charge back at us with its nose high in the air. It was more than obvious that the size of the Lunch Box gives it an unfair performance advantage over the rest of the monster truck field. It's certainly faster than any other monster truck because of its weight, and it's very stable. However, the Lunch Box is not a contender for the off-road world championship—it was never meant to be. It's just a hell of a lot of fun.

\*For more information on the Lunch Box write to:

MRC Tamiya, 2500 Woodbridge Avenue, Edison, NH 08817.

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# INCIDENT

(Continued from page 77)

need a Phillips screwdriver, hobby knife, screwlock compound, grease and pliers to complete the job.

**CONSTRUCTION:** My first impression of the instruction manual was that it should have had more English words and fewer Japanese to better explain the different steps, but just become familiar with both the parts used and the assembly method for each step and there won't be a problem.

The parts diagram in the back of the manual is handy when you're deciding if a certain screw is 3x48, 3x50 or 3x55. Just place the screw in question on the diagram and you won't have to backtrack to find out where you used a 50mm instead of a 48mm screw.

I'm sure that at this point there's someone out there saying: "I could tell the difference. I don't need the diagram." These are the people who'll be rebuilding while you're practicing for the next race! Use the diagram.

While the instructions are quite straightforward once you're used to them, there are a few items worth mentioning that will help the building process.

The first nine steps deal with building the three differentials which utilize a group of loose ball bearings to smooth out the power distribution. Some of these balls are the smallest I've ever seen, so use a magnetic tray to catch any you might drop. You don't want to lose these in a high-pile carpet!

The assembly of the motor-mount is another step which needs some explanation. The Incident allows the use of five different gear ratios, although the 14-tooth gear (included) is recommended for

break-in. You may decide to change it later according to your individual needs. Whichever gearing you choose, the three-piece motor-mount is assembled different-

ly for each ratio, and must allow the correct gear mesh. An understanding of Step 5 will eliminate the need to assemble the center differential more than once.

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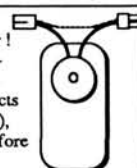
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The assembly of the center drive-shaft is best accomplished by soldering the ball-ends to the shaft, instead of using the 3x3 set screws provided. This will make a

a more permanent assembly, and will eliminate the need to tear the car apart if the set screws come loose.

At this point, you should decide wheth-

er or not you want to go with the 4-wheel steering system (4WS). Although the Incident has all the mechanics to be set up for 4WS (except a rear pitman arm), the instructions assume you're going to steer with the front wheels. However, everything's there to experiment with a 4WS setup.

The car is easily converted to 2WS by using one 10mm screw (included) to make the rear bellcrank stationary. I used the 2WS system and found the car to be extremely responsive.

I chose the Circus JR Winner Series radio system to guide my Incident. This first-class wheel radio is loaded with features to make assembly quite easy. The JRS 505 servos fit perfectly, and the receiver is small enough to mount either inside the chassis or on top. I put mine on top to make crystal-changing easier.

**PERFORMANCE:** I enjoyed building the Incident, but the real excitement began when I took it to my favorite track and put it to the test. The center differential torque split, which is 60 percent to the rear and 40 percent to the front, kicks up dirt from the spike tires and provides instant acceleration. It's truly a case of

*(Continued on page 123)*

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T H E

R A C E

# GRAND NATIONAL

The Raco GN (Grand Nationals) at home on the speedway.



by TAI SUGAHARA

The thrill of Talladega and Daytona captured in 1/4 scale!

**L**OVE HIM, or hate him, Dale Earnhardt has shown America what driving a stock car is all about. Bumping and banging his way through traffic, Earnhardt won the '87 NASCAR Championship. He proved that stock cars can take a beating and keep going. RACO's\* new quarter-scale Grand National (GN) is just the ticket for you to enter the world of stock car racing. This car is built to take a beating. It's also built to race.

**THE KIT:** The GN has a slick '87 Ford T-Bird body, covering a beautiful piece of craftsmanship. The chassis features fully independent front and rear suspension. Coil-over shocks are used on all four corners. The Zenoah Max-Power, 1.4-cubic-inch, 2-stroke engine is installed in a mid-engined configuration. A recoil-type starter is mounted on the engine. (Continued on page 140)



Left, heavy-duty coil-over shocks are used on the front suspension. Right, at the rear, the GN has disc brakes and a quick-change gearbox.



# INCIDENT

(Continued from page 118)

"now you see it, now you don't." The trick with this car is getting the center ball-diff dialed in. This may take a few tries interlaced with running sessions to see where you are.

The variable speed control, which is forward-plus-dynamic braking, lets you maneuver perfect power slides around corners as well as eat up the straight-aways. The Incident's fully adjustable suspension system allows you to keep all this power on the track, and helps to limit power-transfer loss owing to over-applying the throttle. This asset will be even more appreciated when using a hot modified motor, which I feel the Incident, like most 4WD cars, could use.

The ample suspension travel and good dampening qualities of the shocks and front and rear stabilizer bars, really give it a lot of "sure-footedness" and general adaptability to a variety of terrains. All this *does* come at the expense of simplicity, but you don't get something for nothing. If you're good about preventative maintenance this should be no problem.

Overall, the Incident is a good-quality

(Continued on page 124)

# CANADIANS

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| WILD ONE .....  | 205.00 | 169.00 | W/CONNECTOR .....   | 59.00 42.00   |
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## INCIDENT

(Continued from page 123)

car made from durable materials. It will be interesting to see if its innovative three-differential system will become common at the track in the future.

*\*The following is the address of Circus Hobbies: Circus Hobbies, 3132 S. Highland Drive, Las Vegas, NV 89109.*

## PANDA

(Continued from page 82)

about 1/4-throttle, and from there on it is relatively proportional. This gap in the speed control is at a low point in the throttle movement, so the surge of power won't affect the handling of the car once it's underway. While heading down the stretch of sand at full throttle (and during subsequent tests) I gave the transmitter some left and right steering. The Panda responded rather well each time, but had a habit of tucking in its outside front wheel, causing a little oversteer during hard cornering. I confirmed this during subsequent tests. This oversteer is brought on for the most part by the shocks. For a beginner-level car, this minor oversteer is still acceptable, but as you become more proficient, you may want to replace the shocks with a set that are oil-dampened, and have adjustable spring tension. This will not only keep the car in a more horizontal position but it will also allow the car to be adjusted for different track conditions. The front suspension with its upper links maintained excellent camber geometry even when the suspension was fully compressed.

(Continued on page 130)

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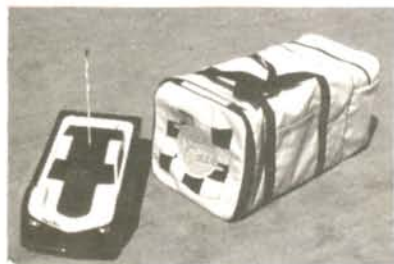
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## BOCA BEARING GUIDE

The Boca Bearing Company, 7040 W. Palmetto Park Rd. Suite 2304, Boca Raton, FL 33433, now offers a Cross Reference Bearing Guide along with pre-packaged kit information for all the most popular radio-control cars available. Write for your free copy.



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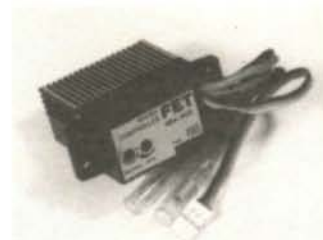


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## CIRCUS SPEED CONTROL

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## DU-BRO

Select the channel that corresponds to the frequency number of your transmitter. Affix these numbers to the frequency number clip, and snap it to the base of your antenna. Select the frequency flag that identifies your transmitter as aircraft or surface-use only and attach it to the tip of your antenna. These numbers comply with the new 1988 AMA frequency regulation.





These new Turnbuckles are universal for all R/C cars requiring 4-40 threads. There's no need to disassemble ball links to make toe-in/toe-out or camber adjustments. With these new turnbuckles and Du-Bro's quality ball links, the modeler will be able to get the ultimate handling performance from their car with minimal maintenance. The turnbuckles are plated with black oxide and are 2 5/8 inches long to fit most applications. For more information contact Du-Bro Products Inc., 480 Bonner Rd., Wanda, IL 60084.



### COBRA B.E.C.

Cobra International, 3338 Cromwell Dr., Norfolk, VA 23509, has just introduced the first Battery Eliminator Circuit that maintains full control of any R/C vehicle during loss of primary battery power. This product, the Pee-Pee, will fit 90 percent of all R/C cars, boats, and airplanes. It will prevent the problem of a runaway vehicle resulting from the loss of adequate receiver voltage. The Pee-Pee will supply a minimum of five volts to the radio receiver for several minutes after the primary power pack is fully discharged. It's fully maintenance-free and comes with double-stick tape for mounting.



### O.S. .10 ENGINE

The new O.S. .10 FP-B ABC is the latest car engine to be offered by O.S. and is perfect for the first-time gas car owners. Like all of the popular FP engines, the .10 FP-B features Schnuerle porting and smooth reliable performance at any throttle setting, so your .10 buggy will go faster and jump farther than ever before. The O.S. .10 FP-B ABC is also designed to be easy to start, and requires very little break-in or maintenance. For more information contact Great Planes Model Distributors Company, P.O. Box 4021, Champaign, IL 61820.



### 2WD WINTER KIT

The new S.T. 1000 Winter Conversion Kit from Snowtime Accessories Ltd. is designed for 1/10-scale 2WD off-road buggies. All parts injection moulded for superior quality in every kit. Kit includes skis, coupling adapters for dual wheels, bolts, washers and assembly instructions. Dual Wheels not included. For further information on this winter racing alternative see your local hobby dealer or contact Vini's R/C and Hobby Supplies, 33-12th Street West, Prince Albert, Sask. Canada S6V 3B4.



### COX OFF-ROAD

The Ultrastock is a 1/10-scale version of Mickey Thompson's popular off-road race car. The two-wheel-drive Cox car features a rugged one-piece plastic box chassis, double-wishbone front suspension, gear-type differential, and a powerful Mabuchi RS-540S motor. The accurately scaled body is formed from tough polycarbonate plastic. Kit includes an authentic decal sheet. Available in kit form or complete package. For more information contact Cox Hobbies Inc., 1525 E. Warner Ave., Santa Ana, CA 92705.



### PRO-MOTORS

CAM Racing Motors now offers a complete line of Pro-Motors that are available for carpet, off-road, on-road, oval and drag racing for use with 4-, 6- or 7-cell batteries. The CAM Pro-Motors won the Pepsi Challenge, and the Twin 125 and the Novak 600 endurance races during the Car Action Weekend at Lake Whippoorwill Speedway. CAM also specializes in built-to-order motors. For more information contact CAM Racing Motors, Rt. 3 Box 680, Huntersville, NC 28078.

Descriptions of new products appearing on these pages were derived from press releases supplied by the manufacturers and/or their advertising agencies. The information given here does not constitute endorsement by Radio Control Car Action, nor guarantee of performance or safety by Radio Control Car Action. When writing to the manufacturer about any product described here, be sure to mention that you read about it in Radio Control Car Action.





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scale car  
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Otv

Model

Price

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C.O.D. \$1.90

TOTAL

(Continued from page 124)

Keep in mind that the Panda is being evaluated as a beginner-level car. A car like this won't be competitive with a high-

dollar racing machine, and it was never meant to be. If you're a beginner in search of a car with which to learn R/C driving, the Panda is a good choice. There are no resistors or mechanical speed controls to get fouled with dirt, and although the

electronics are exposed (don't get them wet!), I think the system will prove more reliable than the standard fare. The Panda is designed in such a way that it's possible to upgrade the suspension or change the

(Continued on page 136)



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## PANDA

(Continued from page 130)

motor to keep pace with your ever-increasing driving skills, and the changing competition. Hobby Shack has an extensive parts network if the Panda is ever in need of repair. The Panda will provide

months of backyard bashing, and with a little work and driving skill, it can be converted to a more competitive machine on the track, even against some more sophisticated cars. One last point: the Panda's extremely low price which includes the radio makes it quite a buy for

any beginner!

\*The following is the address of Hobby

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## GRAND NAT.

(Continued from page 122)

The gearbox is fully enclosed. There is also a quick-change with three available gear ratios.

**CONSTRUCTION:** The car comes with detailed instructions. The numerous photos clearly identify the steps to

follow. Many of the sub-assemblies are prebuilt at the factory. My car used an Airtronics\* receiver and XL2P transmitter. The servos were Futaba\* S-34s.

RACO assembled my car at the factory to help me with my deadline. I'm told the average racer can put the

car together in three hours. While the car seems to be complex, it doesn't really have all that many parts to assemble, and I'm sure it can be built in three to four hours.

When you've finished building the car, you suddenly realize just how

(Continued page 142)

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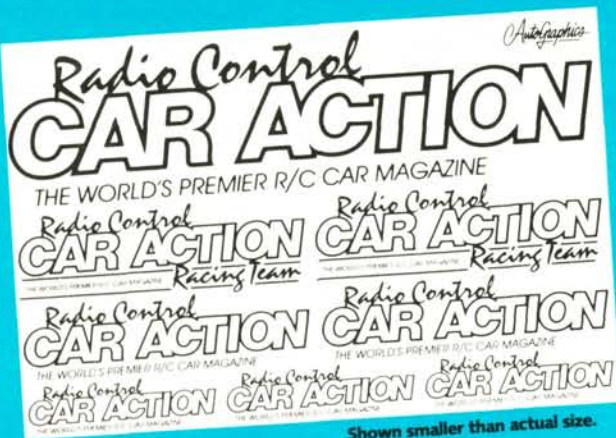
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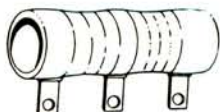
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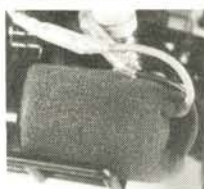
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## GRAND NAT.

(Continued from page 140)

large quarter-scale really is. With the T-Bird body on, the car is four feet long. It really looks huge when it takes up half the floor space in the living room!

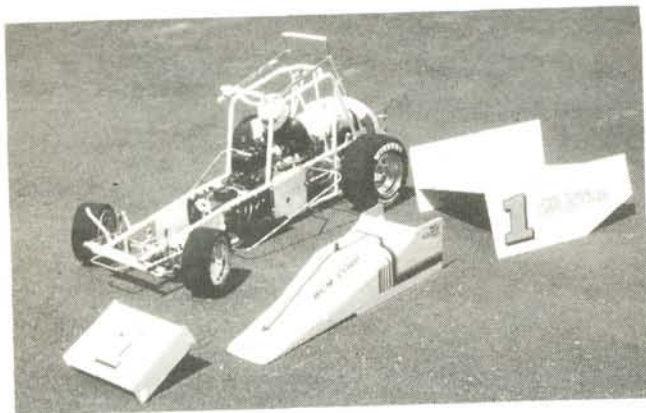
**PERFORMANCE:** Just looking at the car gets your adrenaline going. No doubt about it, the RACO GN is built to be raced. I couldn't wait to run the car; I could always paint the body and get photos later.

The instructions tell you to find a

(Continued on page 144)

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## GRAND NAT.

(Continued from page 142)

wide open place to make your first test run, so I searched all over for an empty parking lot that wasn't too close to civilization. I really feared losing control of this thirty-pound racer. Finally, I located a building with a brand-new, asphalt parking lot.

Be sure to follow the starting instructions precisely for safety. Always start the car with its nose butted against a solid surface. With the choke on, it only takes a couple of pulls on that

(Continued on page 148)



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# GRAND NAT.

(Continued from page 144)

starter to fire up. Let the car warm up before you try running it. I found that the choke has to be off to allow the

motor to rev freely enough for the GN to run. The Zenoah engine sounds great when running. The tuned exhaust produces maximum horsepower while effectively cutting the noise. The

RACO GN may not sound like Earnhardt's NASCAR stocker, but there is no questioning its purpose.

After some very tentative squeezes on the throttle, I became bolder. Soon the Zenoah engine was wound out and the GN was flying. I expected it to have severe oversteer, but there was only mild oversteer. Even when the car *did* start to spin, half the time I could turn into the spin and save it. As I ran faster and started using the brakes to set up the turns, I discovered how much traction the new pavement was giving me. The RACO GN is very impressive performing traction rolls, and handles well. The first crash must have produced half-a-dozen barrel rolls! Even when it landed on its roof, the engine just idled merrily along. I was glad I hadn't yet painted the car!

My car came with the sixteen-ounce gas tank for extended runs. There is also a ROAR legal, eight-ounce tank available. The GN runs on a 40:1 gas/oil mixture. A five-cell, sub-C, Ni-Cd battery pack is used for the onboard radio systems.

The car does not accelerate really quickly. The clutch takes its time engaging. Once the Zenoah is "on the pipe," the acceleration really picks up. Top speed is probably near 40mph, with the standard 6:1 gear ratio. The car is much easier to drive than 1/12-scale electrics. The suspension system really keeps the car on the track.

I can see why 1/4-scale racing is growing so quickly. The RACO GN is the closest I've come in R/C to my days of racing full-scale stock cars. While you must be careful when running any 1/4-scale car, they are still much safer than full-size cars, relatively speaking, and you don't have to race against Earnhart in a RACO GN, as you have a better chance of winning!

*\*The following is the address of the manufacturer mentioned in this article:*

RACO Model Craft, 1400 E. St., Andrew's Place, Santa Ana, CA 92705.



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